THE ESSENTIAL GUIDE TO WHAT'S ON AND WHERE TO GO

APRIL 1995, ISSUE 5 £2.50

Inside Radio 1FM's Internet night

The best and worst of marketing on the Net

phitosopb

A survivor's guide to Demon

Thenewsgroup Figure 1988 Figu

14,000 conversations you can join in with

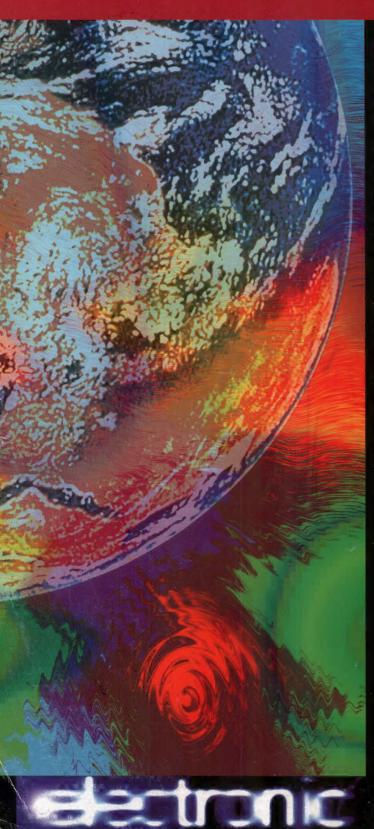


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GET ON! 10 PAGES OF HOW TO GET CONNECTED AND THE BIGGEST EVER WHAT'S ON GUIDE

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The password for news

For starters

The latest facts, figures and trends, brought to you courtesy of INTERNET magazine.

What have you always wanted to know about the Net?

As ever, send to neile@computing.emap.co.uk

and we'll do our best to oblige.



Pay to use the Internet? We already do, but on top of phone bills, access providers may start charging for the time we spend online it could happen (page 24).

Just browsing

Easier browsing has been a major factor in the Internet's phenomenal growth. As a result WWW usage has quickly overtaken Gopher usage.

Growth of Internet browsing services (Megabytes per month)

Date	Gopher	www
Nov 92	24,744	39
Dec 92	34,247	78
Jan 93	43,238	122
Feb 93	60,897	512
Mar 93	79,024	3,614
Apr 93	89,074	8,116
May 93	103,870	17,298
Jun 93	111,881	35,701
Jul 93	139,006	48,728
Aug 93	148,795	50,779
Sep 93	198,096	75,401
Oct 93	250,784	122,173
Nov 93	291,133	172,340
Dec 93	309,690	225,443
Jan 94	374,681	269,129
Feb 94	396,066	347,504
Mar 94	480,690	518,084
Apr 94	517,625	671,950
May 94	555,708	799,163
Jun 94	567,479	946,539
Jul 94	555,089	1,056,081
Aug 94	651,846	1,311,822
Sep 94	751,455	1,593,464
Oct 94	864,259	2,152,957
Nov 94	867,043	3,126,195



One of the busiest sites on the Net has to be the Yahoo search tool (http://akebono.stanford.edu/yahoo). Recent statistics straight from the Random Yahoo Link (based on 271,206 accesses over 27 days!), highlight trends in browser usage. Netscape's Navigator is by far the most popular client with 83.5% of all accesses. Lagging way behind are NCSA's Mosaic at 8.4%, all other browsers at 4.5%, and the text-only client Lynx at a puny 3.7%.



High point of the month

Internet telephones have arrived and could revolutionise the way we use the phone and the Internet (page 111).

The Top 40

The chart below lists the most popular subject areas on our own Web site (http://www.emap.co.uk). It shows trends in usage, taken from the online version of our What's On guide (page 61).



guide (page 61).		
Subject matter	Usage	
1 Adult	204	
2 Access Providers	80	
	77	
3 Weird! 4 News / Publications	67	
5 Internet Tools	52	
5 Internet Tools 6 Computer Software	51	
7 Entertainment 8 Film and TV	43	
8 Film and TV	41	1
9 Music	32	1
IU AII	30	T. W.
11 Banks	26	2525
12 Computer Hardware	25	Mark 15
13 Employment	25	The T
14 Health	25	
15 Sport	23	
16 Business	21	
17 Books	20	
10 Education	20	
19 Exhibitions	20	-
20 Shopping	20	
21 Food and Drink	19	
22 Universities	11	
23 Weather 24 Museums	16	
25 Telecomms 26 Transport	15	
27 Finance	14	
28 Games	13	The Man and a second
20 Paul Fetato	10	
30 Travel Information	10 10	
31 Government	8	
32 Libraries	8	
33 Reference	7	
34 Law	6	17 5 174
35 Nature	6	
36 Radio	6	A CONTRACTOR
37 Religion	6	Mary Contract
38 Science	6	
39 Politics	5	Target S
40 Time	5	

How many users?

According to recent estimates, 30 million people are using the Internet. California-based Network Wizards (http://www.nw.com) counted 4.85 million host computers but it missed the ones hidden behind security screens and firewalls. Add them and machines on the Internet total about 5.7 million.

INTERNET

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Frontline - Tel: 0733 555161

Billboard advertising is coming to an Internet Web page near you! Corporate marketing departments are rushing to come up with the definitive, award-winning,

online advertising campaign and a lot of money is about to change hands. Companies want a presence on the Internet, Web maestros are itching to give it to them, but the ad agencies don't have the Net know-how to advise on strategy. Traditional approaches just don't work - some of the pages already on the Net are ample proof of that (see Market Traders, page 52).

And what about us users? If they want to sell to us they need to find innovative and adventurous ways to capture our imaginations, and that will take some effort. In the meantime, some people will get rich, some will get ripped off, and others will get fired, but eventually we will be left with an online advertising culture based on the values of the Net - with none of the usual bull!

Neil Ellul, Editor

103 The newsgroup explosion

There are over 14,000 conversations going on within Usenet. We name the most noteworthy newsgroups, and tell you how to join them.

26 A survivor's guide to Demon

Sometimes it's hard to get on with Demon, the UK's most popular, low-cost access provider. Tim Dawson tells his tale and offers advice on how to make the most of this hard-to-learn service.



Radio 1FM's interactive music night on 26 March is set to be one of the year's biggest events. We tell you how to tune in, log on and have fun!



It was big last month, now it's enormous. New sites include Lego, Timex, Penthouse, CDNow, Software Net and the Klingon Language Institute.



56 How do I get connected?

Practical and easy to follow, our step-by-step guide tells you exactly how to get on to the Internet.

28 Vince Clark: driving the fans wild

Erasure keyboard junkie and self-confessed Net freak, Vince, tells David Pitchford how his record company has been one of the first to use the Internet for taking care of music business.

123 The Internet access buyer's guide

Which access provider has the right service for you, and how much will it cost? Everything you need to know about more than 40 UK providers in our newly-expanded seven-page section.

40 Tours of the Internet: online publications

Jim Hayes tours the Net's esoteric ezines in search of up-to-date news and information.

52 The best and worst of marketing on the Net

New contributor Simon Waldman asks: have the companies putting up Web sites given any thought to their potential clients?

Annual subscription rates are £30 a year (UK); £48 a year (Europe); £70 a year (airmail to rest of world) Subscriptions Telephone Hotline: 0181 868 7618, Fax: 0181 429 3117 Email: subs.internet@computing. emap.co.uk Or write to: Internet Subscriptions, EMAP Readerlink, Audit House, Field End Road, Eastcote, Ruislip, Middlesex HA4 9LT, England.

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FILE ITEMUSETTINGS OCCUPANTS FILE ITEMUSETTINGS FFEFF

36 How to become an access provider

Becoming an Internet access provider is more difficult than you'd think. Take a look here at what's involved before making any rash decisions.



47 Dial ISDN for speed

BT's ISDN has been hailed as the modem killer for some time now. It looks like the Web browser might be the weapon to do it.

21 Neighbourhood watch

Web maestro **Ivan Pope** explores the use of scripting – the behind-the-scenes stuff that's pushing what's possible with Web servers.

23 USA today

The US Government used to finance the Net, now it's just another user. **Daniel Dern** looks at how it's managing the transition.

24 Attitude problem

Paul Lavin's a reasonable guy – he just wants the whole Internet to himself. Who are we to disagree with him?



Fashion, film, fantasy fiction, plus several things that don't begin with F – in our latest crop of case studies.

110 Product reviews

This month we rate Microsoft's Internet Assistant for Word, the Internet Phone, Silicon Graphics' WebForce, Unipalm's new Mail-It, and more.

44 OJ Simpson's trial by Net

As the OJ trial ambles on, we see how the Net is used to keep up-to-date with the news and jokes.

43 Pick of the Month

Our verdict on what's hot, and what's not on the Net this month.

55 The virtual conference

Comms International is about to launch its first virtual conference. Editor, Ian Scales tells how he'll mix the real world and the virtual.



Regular features

7 News Compuserve buys Spry; searching the Net with InfoSeek; HoTMetaL Pro for Macintosh; Private Eye gets censored; Comic Relief online; and more.

14 Events: what you missed while you were online, and what you're going to miss. Includes the latest gossip from Cyberia.

18 Messages It appears you like the bigger issues – so do we! Here's a new selection of your views – keep them coming!

54 Subscribe now! You still have time to take us up on our special subscription price, it's just £19.95.

114 Internet Book Service
Use our service to purchase those hard to find reference tomes.

116 FAQ&A Questions by you, answers provided by Marc Nicholas.

120 The Glossary Still confused? Stop here for help with all that jargon.

130 The Diary Day by day, what's happening in the UK.

130 Advertisers' Index Still the world's only ad index with telephone numbers and email addresses.

Free Instant Internet Access 20

Our virus-checked cover disk has ALL the software you need to get FREE access. Until 30 April you'll be able to trawl the Net using Leaf's Servelan service. Just add a PC, Windows and a modem. The software, from NetManage, is a sampler version of its top-rated Chameleon products.

What? Still no modem? Turn to page 119 for our Get On! offer.

No disk on the cover? Complain to your newsagent. Damaged disk? Return it to PC Wise, Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan CF48 2YY.

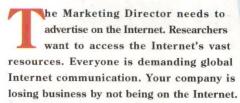
Next month in Internet...

We'll bring you more listings, more reviews, and even more essential information. Plus we have a special report on cybercops, a step-by-step guide to getting on with Demon; and how to post Anonymous email. Don't miss out. Place your order now – on sale 24 April.

GET ON!

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BATTERY, AND A YEAR'S
SUBSCRIPTION TO THE
WORLD'S MOST
ESSENTIAL INTERNET
MAGAZINE. PAGE 119

The key to Internet Security...



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INTERNET IN A BAG

INTERNET CHAMELEON, from NetManage ... the application

The world's leading professional Internet access software for Windows. This high-value package contains a host of applications including WebSurfer, NewtNews, Gopher, FTP, a range of Internet diagnostic tools and fully-featured email with MIME. Quick and simple to install, Internet Chameleon gives you every Internet facility you need to roam the super highway in style.

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News_

COMPUSERVE BIDS FOR WORLD DOMINATION

Compuserve, which with 2.7 million users is the largest online BBS, has acquired Washington-based Net software company Spry. The deal, worth \$100 million, is the largest Internet buy-out to date and is the opening gambit in Compuserve's scheme to become the world's largest Internet access provider. It presently has 30,000 dialup ports at over 420 POPs (Points of Presence) in 140 countries.

Spry has been working closely with Compuserve for the last six months. Its hugely successful Internet-in-a-box connection software turned it into a \$40 million company in the course of 12 months and Compuserve sold the product as part of a distribution contract.

Spry is now the core of Compuserve's Internet Division and will continue to develop products. The first is a 'onebutton' downloadable browser.

Dave Pool, founder of Spry and now VP of the Internet Division, said, "We are now seeing a convergence of the Internet and the world of online marketing – Compuserve is the glue between them."

From 11 April, existing Compuserve members can download AIR Mosaic, which will install, configure TCP/IP, and set-up a Compuserve Internet access account.

This means that the new version of Compuserve's WinCIM 1.4 software automatically becomes a TCP/IP client because it is Winsock-compliant, allowing the service to be accessed across the Internet as well as via direct dialup. WinCIM 2.0, when it's available, will be one application combining the present CIM and Web browser.

The final step will be for Compuserve to make all its existing POPs compatible with PPP (Point to Point Protocol), so existing Internet users can switch to Compuserve for their access. This move will make the company truly international and the largest provider in the world.

Compuserve has refused to divulge its full access pricing scheme, but has not ruled out the possibility of a flat monthly fee for Web browsing. For info send email to smark@csi. compuserve.com

News in brief

Penthouse magazine's

www debut (http://
www.penthousemag.
com) broke all known
usage records before it
was even formally
announced. Over
802,000 visits were
logged on its first day
without any advertising
or promotion – the only
advance word came
through the online
clearing houses which
post what's cool on
the Internet.

Cutting edge Internet radio station WXYC's
David McConville has voiced concern that proposed changes in the copyright law currently before Congress could seriously threaten the future of digital radio. He strongly recommends reading the legal pages at http://sunsite.unc.edu/wxyc/legal.html before planning a Net broadcast.

The US government is releasing declassified spy satellite photos

over the Internet. The pictures include the first ever successful satellite image – of a military airfield in the Soviet Far East. Around 800,000 images taken between 1969 and 1972 will be revealed online in the next 18 months at http://www.usgs.gov/or by FTP to edeftp.cr. usgs.gov/pub/dat/DCLASS

Spyglass has released the Windows version of Enhanced Mosaic 2.0, its commercial Web browser. It has an open and adaptable architecture allowing the co-use of programs such as Acrobat and SoftQuad, as well as plug-in security modules. Other new features include IPEG and Gif viewers. See http://www. spyglass.com

VIRGIN FLOATS NEW WEB SITE VIA SUPERJANET

Virgin has launched the 'Raft' and now has a Web site. It is located at http://www.umg.co.uk and connected to the Internet via the SuperJanet network.

This is the UK's high-speed academic network and the bandwidth it offers means that Virgin will be able to experiment with interactive TV, video-conferencing and multi-user graphical chat rooms over the Net.

Virgin's Internet project leader, Jeremy Silver, said, "The high-speed interactive experiments we're planning are going to be an intriguing glimpse into the future for all concerned."

SuperJanet runs at least a hundred times faster than anything currently available to homes and Virgin's server transfers information at 2Mbps, compared to current average domestic speeds of 14.4kbps.

Paul Conroy, MD of Virgin Records, said, "We're very excited by the reality of the Internet. It allows us to reach new and existing audiences through a dynamic new medium. The Internet may be in its infancy, but it has already proved to be a powerful communications tool."

The Raft features news, sound bites and graphics of Virgin bands, plus a global gig guide – Who's Playing Anywhere in the World Tonight. Thematic games and screensavers are also being developed. Artists involved include Massive Ättack, McAlmont, Whale, The Verve, Dreadzone and Future Sound of London.

Featured groups have their own spaces which visitors can move through to reveal different types of information. For example, the Massive Attack area has musician/fine artist 3D's graphic work, as well as an online chat area where fans can exchange information and gossip.

Internet creatives state51 and students from the Royal College of Art are helping with the artistic aspects of the Raft, and Imperial College has provided technical input. Jeremy Silver said, "Musicians, computer technicians and designers rarely collaborate, but this is a great team of people."



Dan O'Brien is caught in the act

NET SHOWTIME

The Internet took to the West End stage earlier this month with a new comedy for the Net-obsessed. Caught in the Net 2, a follow-up to last summer's Edinburgh festival hit of the same name, is described as 'boy meets girl meets computer' and is the creation of Dan O'Brien, allround Internet guru and associate editor of the just-launched UK version of the US magazine Wired.

The play depicts a man who lives entirely through the Net and involves O'Brien surfing live during the show.

Caught in the Net 2 is at the Arts Theatre in Great Newport Street, London WC2, on Sunday 26 March and Sunday 9 April 9. Call 0171 836 3334 for details.

PHOTOGRAPHY BY DAVID TONGE

News in brief

The US space agency
NASA, a specialist in
firsts, made virtually all
aspects of its lastest
shuttle mission publicly
available on the WWW
for the first time.
Several hundred
thousand people
requested information;
some questions were
even relayed to the
astronauts. NASA can be
reached at http://
www.nasa.gov

Delphi Internet has signed a license and distribution agreement with Netscape for Navigator Netsite Commerce Server client/server software as part of its effort to standardise its Internet access service platform.

Singapore plans to have its broadcasting authority act as neighbourhood police to restrict crime and sleaze in cyberspace. George Yeo, Minister for Information and Arts. said the government would not allow Singapore to be a source of pornographic or incendiary broadcasts on the Internet and existing theft and libel laws could be applied.

UK company, Sonix has announced a free flash Eprom software upgrade enabling its 28.8 kbps modems to be used at line speeds up to 33.6kbps. Contact Sonix on 0285 641651

The Electronic Daily
Telegaph has upgraded
its Internet connection
via a new two megabyte
T1 line, which has
effectively increased its
access capacity more
than tenfold. The
service, at http://
www.telegraph.co.uk is
now substantially faster
and easier to access.

NEW SEARCH ENGINE

The days when the Internet was a difficult place to find information are officially over, according to the president of Infoseek, Stephen T Kirsch.

InfoSeek, a commercial search service, has been successfully trialled and can now provide an inexpensive but efficient way to probe the vast resources of the WWW, Usenet and online news databases.

"The commercial service actually began in December 1994, but wasn't publicly announced for over two months because we wanted to be sure it was solid. Right now, we receive about 15,000 hits a day from all over the world and thousands of people are opening accounts each month," said Kirsch.

InfoSeek can be accessed through the World Wide Web using a browser like Netscape or Mosaic. Results are in hypertext so you can simply click on its links to retrieve information.

It references over 200,000 Web pages, more than 80 computer periodicals and the last four weeks of most public Usenet newsgroups, as well as several specialist databases.

Agreements with the publishers Business Wire, CW Publishing, Information Access, InfoWorld, Newsbytes, PR Newswire and the Reference Press mean that articles from periodicals such as PC Week, Mac Week, Newsbytes, PC Magazine and Computer Shopper, plus selected abstracts from The NY Times, The Wall Street Journal and San Jose Mercury are available.

InfoSeek differs from other Web crawlers such as Lycos, Harvest and the WWWW in several ways. Most notably its 7 Gigabyte Usenet database contains some 2 million articles from over 10,000 groups and can be searched in less than six seconds. This allows you to find

all postings on a specific subject, from a particular email address or in response to a thread, weeks after your access provider has deleted them.

INTERNET listings editor Angus Kennedy has been using the service and said, "Apart from its wider resource-base, it's also the quickest, the easiest to access and returns accurate results."

The InfoSeek database is renewed once a month from scratch. "We add URLs at least once a week, selectively...Our goal is to give a fairly high level search, rather than to randomly trawl to see how many pages we can index," said Kirsch.

Infoseek can be trialed for one month free, after that the service costs \$9.95 per month, which includes a hundred searches. Nil yields aren't charged. To add your own page email www-request@ infoseek.com. InfoSeek can be reached at http://www.infoseek

INTERACTIVE MUSIC NIGHT

Tune in to Radio 1FM on Sunday 26 March from 7pm to 10pm for a unique on-air interactive music night, fronted by the presenters of the Evening Session, Jo Whiley and Steve Lamacq.

A whole host of broadcast and Web events are planned, such as interviews with REM, Massive Attack, Belly, the Orb, Yello and the Residents. Blur will also be talking to fans via IRC. At the show's home page (http://bbcnc.org.uk/online/radiointeract/index.html) there is a downloadable 'virtual album' of unreleased tracks from eight major artists and a free samples database.

In particular, the show will focus on the Internet and how it promises to change the music business and our lives. "When we started to make the programme we had no idea just what we'd taken on and how massive the changes are that are taking place in all forms of entertainment," enthused producer Nick Ware. "Digital technology is revolutionising everything from movies to games, to TV to music, and even in three hours what we'll cover is just the tip of the iceberg."



Interactive presenters Jo Whiley and Steve Lamacq

It's hard to see how the producers have crammed so much in, but will it work? Nick Ware was optimistic about the future and said "The Internet is at a point of incredibly rapid growth and even if it's capable of a small part of everything the hype suggests, it will still make a huge impact on our lives.

"By releasing things like a virtual album and a samples database, we're trying to demonstrate practically the revolutionary ways in which people might make, deliver and receive music in the future."

For further details of the event, and to find out how you can take part in the evening, turn to page 17.

WORDPERFECT WEB AUTHORING

Novell UK is due to release Internet Publisher for Windows, a free patch for WordPerfect 6.1 that allows you to create and view Internet documents without being fluent in HTML (HyperText Markup Language).

Novell is also releasing WordPerfect Internet Publisher Pro for Windows, an open solution that provides seamless connectivity to the Internet from within WordPerfect 6.1. The two products will be available in the UK during the second quarter of 1995.

"With the simple click of a button on the WordPerfect 6.1 toolbar, Internet users will be able to create, publish and view information anytime, anyplace," said Daniel Sumner, brand marketing manager, Novell UK.

Internet Publisher guides you through HTML document creation and then automatically converts the WordPerfect document into a native HTML file. HTML features such as hypertext links, graphics and bullet lists can be accessed via the toolbar.

Internet Publisher and further information can be downloaded from http://www.novell.com/



UK satirical magazine Private Eye has taken a small step into cyberspace by setting up the Eye site (http://www.intervid.co.uk/intervid/eye/gateway.html). The move comes amid concern that litigants may cite Web site providers in libel actions based on contentious material available via the Net.

Although the Eye's home page (or 'Gnomepage') pays homage to the magazine's track record for investigative journalism and exposés, for the moment, the material is restricted to less provocative contents – Lord Gnome's stirring

PRIVATE EYE GOES PUBLIC

editorials, Great Bores of Today, and the cartoon strip Celeb. The columns Poetry Corner and Private I-I-I! are also included. Net visitors will be able to place small ads and order subs.

Eye systems IT manager
Steve Mann told INTERNET the Eye
site is still in embryonic form.
"People have been approaching
us for months about being on the
WWW. Basically, we are not
totally committed to doing it.
The main impetus was to make
the Eye more easily available to
readers abroad – British ex-pats
and those in the US."

However, he said that the Web site has not generated as much interest among the upper echelons of the esteemed organ. "It's a difficult concept to explain to editors," he admits, referring to Eye head honcho and media mug Ian Hislop, but, he continued, "We are aware of the legal issues; we are going to be cautious...Lord Gnome moves in mysterious ways."

However, Scallywag

magazine, the publish-and-bedamned would-be Eye rival, has no such qualms. It has had an Internet site running for some time (http://www.demon.co.uk/ xyz/Scallywag/index.html), which carries full text from the published magazine.

Scallywag is currently battling writs issued against its distributors, printer and a newsagent, by Tory Party director of research Dr Julian Lewis. These followed allegations made against him by the magazine. The March issue was consequently removed from newsagents' shelves but Scallywag has made adroit use of its Internet site to run media coverage of the coverage, and to carry on-going rebuttles from the magazine.

Lewis has apparently not served a libel writ on Scallywag's editors because of the unlikelihood of recovering costs from individuals, but whether his ire will extend to Demon or XYZ has yet to be seen.

News in brief

Netscape's new CEO **Tames Barksdale gets** irritated at the suggestion that his company gives away its highly successful browser Navigator, "It's only free for educational, no-profit and evaluation use" he insists. Over two million copies have been downloaded from Netscape's home site (http://home.mcom. com) alone since the middle of last December, Netscape is unwilling to disclose how many of those copies have actually been licensed.

Police in Hong Kong are attempting to clear up misunderstandings about the raids and suspensions of seven of its eight unlicensed IAPs. Under local laws, providers need to pay HK\$0.09 per minute, even if they aren't using its lines. According to several large providers, they had been assured that no licence was necessary until certain legal questions were clarified. The police claim that the providers have been closed down to investigate hacking allegations and not because they were unlicensed.

Visual Engineering

will release its Unix workstation graphics software and HTML editor, Ovation 2.0, on 1 May and it will cost \$750 per user. Ovation will automatically create WWW presentations using anti-aliasing text, dropin fonts, screen grabs, charts and even Microsoft PowerPoint documents. Go to http://www.cdrom.com /pub/viseng for details.

IN THE PIPELINE

Vossnet is offering a unique way to access the Net in the UK using the highly acclaimed US Pipeline Network's Internaut software.

Internaut is unique is its ability to transparently multi-task many different sessions. It has its own packet-transfer protocol, called Pink Slip, to intelligently manage multiple data streams over an ordinary modem connection. When downloading a large file, for example, Pink Slip automatically adjusts the transfer speed, prioritising individual packets.

If you're reading or replying to mail or news, the background transfer is fast. If new mail arrives, or you open a new window and begin playing a game, those data streams take priority and push the file transfer into the background.

Vossnet provides full Internet access via a PC and all but the Web via a Mac, but you need a PC with at least 8Mb Ram for Web access. Rates are £99 per year or £30 per quarter. This includes ten hours' online time per month. Extra hours are billed at £2 an hour or £199 a year for unlimited connect time.

Try Vossnet for ten-minute stints by calling 01753 737808 or dialup 01753 737888 using a modem and comms package.



Art to go? French artist Christian Boltanski is starting his own bring and buy sale at the Serpentine Gallery's new show

TAKE ME I'M YOURS

Art buffs will be able to access and download the work of leading European and US artists via the Internet, following the opening of a new exhibition at London's Serpentine Gallery this week.

Take Me I'm Yours will allow users to retrieve the work of artists such as Gilbert and George from the UK and Frenchman Christian Boltanski, whose contribution consists of a huge pile of secondhand clothes filling one whole wing of the gallery.

Anyone actually needing a new coat can take the process a stage further and pop down to the Serpentine where Boltanski will invite visitors to take away a few items.

The exhibition's curator is
Hans Ulrich Obrist, who has
previously created shows in an
aeroplane, a kitchen and on a
mountain top. The show is sponsored
by Absolut Vodka and the art is
available for download at http://
www.bt.net/intervid/absolut

News in brief

The Internet Society.

which oversees Internet registration authorities, plans to impose charges on the IP addresses and domain names which are currently free. This may start at around \$50 for a Class C block of about 250 addresses and an annual \$50 maintenance fee. Existing domain names will also attract fees.

Camelot Corp is releasing PICK (Personal Internet Companion Kit), an application enabling full voice duplexing over the Internet. PICK requires a 386 DX33 or better, a sound card, microphone, speakers and a 9600bps modem. Details – US 214 733 3005.



What, none of mine here? Terry Pratchett has a browse at the Internet Bookshop

CONVENIENCE BOOKSTORE GOES ONLINE FOR BUSINESS

The first UK Bookshop on the Internet opened for business last month, claiming it was the largest such venture in the world. The Internet Book Shop (IBS), whose first customer was best-selling author Terry Pratchett, has over 750,000 titles available for browsing users.

Buyers choose a book and then fill in an on-screen order form, which is then passed onto a retailer, who mails the book to the customer. Prices are the same as those in the high street with IBS taking its cut through a 5% commission from the retailer on the the book's cover price.

To join, users register their details with the company and are sent their own membership card and pin number in return for their credit card details.

IBS, owned by Oxford-based Electronic Retail On-line Services (EROS), has been trialled for six months with a thousand guinea pig users.

The bookshop's address is http://www.bookshop.co.uk

MARKET INFO AVAILABLE VIA THE INTERNET

Business types can now use the WWW to view a full index of Mintel reports and their contents pages. Customers can place an order via a printable form or email and the hard copy of the report will be despatched the same day.

Additionally, market information company Mintel will be able to use the Internet as a rapid means of alerting its customers of company developments and initiatives, sending press releases and advertising job opportunities.

Said Mintel's technical development manager Steve Thomson, "The Internet gives us global exposure. It's just as easy for someone in the the USA to look at our World Wide Web pages as it is for someone in the City."

The Mintel Web pages are at http://www.cityscape.co.uk/users/ca93/

Internet Chameleon T C P/I P FOR W I N D O W S

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WINNING ARTISTS



Step into Jeremy Quinn's Virtual Night Club

At last month's first ever
Internet Art Festival, held at
London's Cyberia, the award for
Web design of the year went to
Jeremy Quinn, designer of the
Virtual Night Club plan
(http://www.easynet.co.uk/
pages/cafe/vnc/click.htm).

Quinn's image is one of a new breed that exist purely as Web graphics. His map is clickable and has hypertext links to other areas of the 'club', so it is interactive in a way that isn't possible with traditional graphic art. The best Web site of those entered was named as http://www.wwa.com/tab/alibrary.htm at the University of Westminster. The judges cited its witty approach to packaging a great deal of necessarily 'housekeeping information'.

The winner of the hotlycontested online artist category was Alex Berka, whose work can be seen at http://www. easynet.co.uk/images/art/ aberka/aberkal.

The event was the first in the Internet 2000 series established by INTERNET and Cyberia to highlight the use of the Internet in a range of different areas and to consider the major issues in the development of the medium.

See the winning images the easy way by pointing your Web browser at the INTERNET home page at http://www. emap.co.uk. All the links are there, ready to use.

News in brief

Rishtay, a moderated matrimonial service established primarily for the global Muslim community, is now available on the Internet courtesy of Ubaid R Khan of the Georgia Institute of Technology in Atlanta. Replies go directly to the advertiser. To subscribe to Rishtay, email a message with the word 'subscribe' in the subject field to rishtay-request@ microa.mirc.gatech.edu

Hargrave & Hargrave, an LA CPA firm have launched Tax Wizard, a tax preparation service on the WWW. Users will be able to access Tax Wizard to file claims or to find out how to check on the status of their refunds from the US IRS. This will be particularly useful for filing US tax returns from abroad – http://taxwizard.com

Carnegie Mellon University, the home of Lycos and CU-SeeMe, and Visa is forming a partnership to develop and conduct a trial of NetBill, a prototype online payment system. NetBill will act as a third party to provide authentication, account management. transaction processing, billing, and reporting services for networkbased clients and users. More info on the NetBill project is available at http:// www.ini.cmu.edu/ netbill/

CORPORATES IMPLEMENT NETIQUETTE GUIDELINES

Concern that their employees may behave 'inappropriately' while online has prompted many companies to draft guidelines governing Net behavior.

"Having employees on the Internet is risky on the company's part, and they have a right to be concerned about exposure," said Robert Harvey, an analyst at the Massachusetts-based Internet Security Group.

"For instance, people can be giving out advice from a corporate address without that company's knowledge or sanction, and it looks like the advice has been endorsed by the company."

Among those drafting rules for 'netiquette' are US companies such as Chase Manhattan Bank. According to spokesperson Amy Sudol, the New York City-based bank is "working on appropriate usage policies" to cover the time its employees spend online. These are being developed as a co-operative effort between the corporate information systems, security and legal departments.

Johnson Controls, a US company located in Milwaukee, Wisconsin, has recently drafted a policy on Internet protocol for its employees. This forbids them from making harassing or offensive online statements, and prohibits activities such as job seeking outside the company and chain letters.

Eastman Kodak in New York has been conducting internal investigations of its electronic mail system. The company is unhappy about newsgroup messages emanating from company addresses without disclaimers absolving Kodak from endorsement of opinions expressed online.

"It's all well and good to have such policies, but it's almost impossible to control [the transmission of online messages] unless each company monitors a server connected to the Internet," said Harvey. "Such policies will provide some benefit, but it is difficult to control people unless [their online connection] is turned off or their mail is forced to go through a clearinghouse."



ORACLE OFFERS

Global access to Oracle
Corporation's ConText language
analysis server will be available free
of charge for a limited time on the
Web this spring. Surfers will be able
to send text documents to the server
and have them processed and
returned in HyperText Markup
Language (HTML), with an
automatically generated index and
document synopsis.

Also available free on the Net is the Oracle World Wide Web Interface Software Tool Kit, which integrates Oracle databases with WWW servers. The product allows Internet developers to access Oracle? database data linked to a Web server. PL/SQL, Oracle's standard database language, is translated to HTML, the standard Internet language, via an Oracle gateway for WWW servers which is included in the kit.

For the service and software offerings, keep checking the Oracle site at http://www.oracle.com

News in brief

An article by Leonard Doyle in The Independent on 7 March 1995 alleged that the ski-masked Subcommandante Marcos of Mexico's Zapatista Liberation Army has invaded cyberspace to launch a propaganda offensive against the government and the World Bank. **Apparently Marcos** carries a laptop computer in a backpack and plugs it into the cigarette lighter of his pick-up truck before tapping out his famous communiqués which are then broadcast over the Internet. However, according to Harry M **Cleaver of Texas** University, and supposedly a key link in the rebel's information chain, despite the proliferation of Zapatista propaganda on the Net, none of the assertions about the Zapatista's techno capabilities have actually can confirmed.

Apple is configuring a member of its PowerPCbased Workgroup Server line to operate as a WWW host using Biap System's forthcoming MacHTTP 3.0.

Secure Hypertext Transport Protocol (S-HTTP) and Secure Sockets Layer (SSL) are emerging as standards

for securing data. SHTTP, developed by
Terisa Systems, RSA
Data Security Inc and
Enterprise Integration
Technologies is being
worked on by the
Internet Engineering
Task Force and
promulgated by the
WWW Consortium. SSL
was developed by
Netscape and is publicly
available through its
popular Net software.

SCHOOL EXCHANGE

Three UK schools and a technology college are to link up via the Internet with four schools in the United States to exchange information about environmental issues in their areas.

The initiative is part of the on-going Dixons Schoolsnet project and the British schools will initially use the Internet to communicate with each other before moving on to talk to their counterparts in the US.

The project is sponsored by UK electrical retailer Dixons which will pay for the schools' installation and maintenance costs. US computer manufacturer Packard Bell will supply each school with a pentium multimedia machine.

The three UK schools are Burnham Grammar School in Berkshire, Claire's Court School in Maidenhead and Philips High School in Manchester.
The college is Dixons City
Technology College in Bradford.

The four were choosen because they displayed a "flexible and enthusiastic approach to the project", according to Dixons MD Colin Glass, who added, "This initiative will provide the schools with the facility to participate in networking which will become commonplace."



Comedian Lenny Henry joins the Internet for Red Nose Day

INTERNET GIVES A BOOST TO COMIC RELIEF

Last month's Red Nose Day was promoted via a Web site, the first time the Internet has been used to promote Comic Relief.

The pages enabled volunteers to exchange ideas about fundraising and carried a list of the top ten ways to persuade donors to part with their cash. Aside from information, the site also offered comedy and cartoons as light relief plus background information for the press.

Anyone browing the site was encouraged to give generously to the cause and a running total of how much money was raised from the day was supplied.

Pipex generously gave Comic Relief a free Net connection and provided electronic mail facilities for the organisation's London headquarters.

HOTMETAL CROSSES OVER

SoftQuad of Toronto has anounced that its popular HTML editor HoTMetaL Pro is now shipping on the following new platforms: Apple Macintosh, SGI/IRIX, HP-UX, AIX/RS6000, Sun/SPARC Solaris 2 and DecAlpha OSF/1. These versions are in addition to the original Windows version.

"One of the Internet's great, rarely recognised features is that it doesn't care which operating system you use," said Yuri Rubinsky, president of SoftQuad Inc. "By providing our technology across multiple platforms, we address the broadest possible range of publishing needs for the widest possible audience of personal and professional publishers."

HoTMetaL's popularity has been climbing steadily since it was first released as freeware in June 1994 and over 100,00 users have now taken advantage of its simple Web authoring process.

"The great response to
HoTMeTaL confirmed to us that
Internet users require a professional
editor," said Liam Quinn, HoTMeTaL
development manager. "They are
asking for publishing tools that hide
HTML complexities yet ensure that
HTML-valid documents adhere to
accepted industry standards."

HoTMetaL Pro adheres strictly to HTML standards and offers many features for both novice and experienced HTML publishers. These include templates, dialogue box support for linking to other documents, spell checking, a thesaurus, context-sensitive search and replace, WYSIWYG tables, flexible stylesheets and an importing feature that cleans up and converts invalid HTML documents.

HoTMetal Pro sells for \$195 and further details can be obtained via email to lucy@sq.com or from SoftQuad's Web site at http:// www.sq.com

ENHANCEMENTS GALORE IN THE NEW BETA RELEASE OF NETSCAPE

Netscape has released Netscape Navigator 1.1(beta), a significantly improved version of its popular Internet browser, which now supports 32-bit Windows and Apple PowerMacs.

Pages can now be updated without reload, enabling such Web services as inline animation, sportcasting, stock quotes and news bulletins. The Usenet interface has hierarchical browsing and transparent MIME message-handling to attach multimedia documents to email. Text can be placed in multiple columns using HTML 3.0 tables and

picture placement is more flexible, allowing graphical backdrops. A pop-up mouse button menu shortcuts many tasks and permits off-the-page graphics capture. Links can also be dragged and dropped to create bookmark files. Many bugs have been fixed such as print layout and DNS failure problems.

Navigator can be obtained via anonymous FTP from ftp.netscape.com. Additional information is available at http://home.netscape.com, by sending email to info@netscape.com or tel: 415 528 2555.



SLOT FOR A NEW MODEM STACK

The UK communications firm TCL (Technology Concepts Limited) has launched a product which provides a tidy and efficient way to turn a PC into a full-scale Internet host.

The Superport Datablast modem stack is a complete serial port/modem solution for PC servers, supporting up to 128 V.34 modems from a single PC. It combines TCL's high-speed intelligent multi-port serial I/O technology with the latest Rockwell V.34 modem chipset. It's designed and manufactured in the UK and BABT approved.

Its base unit/PSU provides power and connections via an internal slot connector, eliminating cables or further PSUs. Expansion is via a

maximum of eight snap-in layers of up to four modems, controlled by a front-end processor controller card in a single PC slot. Further expansion is limited only by available slots.

The controller card's Risc processor and private memory combination reduces almost 90% of the overheads usual with external modem banks. Each layer has four high-speed Risc powered serial ports, one for each modem. Importantly, if a problem occurs, a layer can be unsnapped and replaced or fixed with minimal downtime.

For more details Raza Farahat at Technology Concepts Ltd on 01633 872611.

PROVIDERS POPPING UP

UK Internet access providers (IAPs) now number 21 and Internet access is just a phone call away in 41 towns and cities - up from just a handful of places a year ago.

INTERNET editor Neil Ellul commented, "Local-call Internet access will soon be available everywhere in the UK, even before the full entry to the market later this year of big-name providers like BT and Compuserve." (See story on page 7.)

UK LAPs now have Points of Presence (POPs) in Aberdeen, Abingdon, Belfast, Birmingham, Bracknell, Bradford, Brighton, Bristol, Cambridge, Canterbury, Cardiff, Coventry, Dewesbury, Douglas, Edinburgh, Exeter, Falkirk, Glasgow, Gloucester, Hull, Isle of Wight, Langley, Leeds, Leicester, Liverpool, London, Luton, Manchester, Milton Keynes, Newbury, Newcastle, Nottingham, Preston, Reading, Saffron Walden, Sheffield, Southampton, Sunderland, Swindon, Warrington and Wolverhampton.

News in brief

Reno's QuoteCom,

which successfully provides a financial analysis service over the Web, is preparing to launch a trading service by August 1995. So too is New Yorks' K **Aufhauser & Co which** has already used a Telnet trading system for the last four months. Clients have reacted favourably to its 10% discount on commission and more than 2000 of the company's 20,000 clients take advantage of it. Most brokerages, however, are staying away until security fears are allayed.

This spring Spry, which was recently acquired by Compuserve, will release, Internet Office, a secure-HTTP TCP/IP client that combines remote and lan access to the Internet. Windows and large hosts under one roof.

Rumours are circulating about boardroom battles at the UK's largest IAP -Demon. The provider has recently been the subject of much user discontent about service quality and system overload, and it is believed that disagreements about the direction of the company may have prompted the departure of director and 20% shareholder Grahame Davies.

INTERNET's news briefs are produced with the assistance of Individual Software's First! email service. For a free trial, contact Ted Howard-Jones at thi@individual.com or tol 01491 638123



FREEDOM ON TRIAL

A lawsuit involving a BBS (bulletin board service), a disgruntled minister and secret religious teachings may put the free exchange of information on the Internet to the test.

The Church of Scientology, based in Los Angeles, has filed a law suit against a ministerial malcontent and the online

service that allowed him to post confidential and copyrighted material without its permission. Having left the Church in 1982.

Pulpit fiction: John Travolta strutted from disco to Dianetics

former Scientology minister Dennis Erlich has been using an LA BBS to post invective about the Church and its teachings. As part of his criticism, Erlich has repeatedly drawn from copyrighted material owned by the Church and posted teachings not intended for public dissemination and considered trade secrets.

In a preliminary hearing in late February, it was determined that the BBS and the provider that gives it Internet access -San Jose company Netcom On-Line Communications Services were not responsible for carrying what US courts may decide is illegal information. The same hearing issued a temporary restraining order against Erlich, prohibiting him from posting material until the case is brought to court.

Despite the court's decision not to try the Internet providers, the Scientologists intend to refile against them. "A means of control should exist whereby access operators and their

organisations are held responsible for what is posted on the Internet," said Helena Korbin, attorney for the Church.

However, this is not the commonly accepted wisdom, according to Kathleen Kells, director of the US-based nonprofit organisation Computer **Professionals for Social** Responsibility. "We hold that the service carrier should also not be held responsible" if its services are used illegally, she said. "This is a case where technology has gone ahead of the legal system."

In a related incident, Finnish police seized data from Johan Helsingius, who ran an anonymity server which had been 'masking' 7000 messages daily through the Internet.

They found that files stolen from the Church of Scientology had been distributed through the server. However, it was eventually concluded that Helsinguis had not broken any Finnish laws.

Events

OPENINGS

Café society

Cambridge's newly-opened CB1 is a café with Internet access on the menu, rather than a room full of screens where coffee is served.

It's a case of second-hand bookshop meets coffee shop, meets community centre. meets the Net, so the ambience is traditional café low-tech - books line the walls and patrons chat, drink coffee and read newspapers. Only once you've sat down with your coffee might you notice the NeXt terminals almost incidentally occupying one corner of the room. There is no machine worship here cigarettes smoulder casually under the screens and hot coffee is suspended precariously above keyboards.

"I call it a second-hand bookshop café," says proprietor Dr Daniel Sturdy, who opened CB1 in January this year. "I want the atmosphere to be friendly and non-threatening for people who may not yet know much about computers," he adds.

Daniel was doing post-doctorate work at Cambridge University on computational psycholinguistics and his researches often took him onto the Net in pursuit of material and correspondents. Tired of academia and enamoured with the possibilities of the Internet, he decided to open the café last year.

At the moment CB1 has three NeXt terminals linked to Internet access provider and close neighbour, CityScape. Daniel has also been able to take advantage of the Centrex service offered by local cable operator Cambridge Cable, which allows the telecomms operator to offer switchboard features, like call transfer. short dial codes and so on, from his exchange. Like a private switchboard, calls between extensions (or in this case, Centrex 'group' members) have no time charges. By joining Cityscape's Centrex group, for regular visitors dialup access can be provided at a reasonable fixed sum. CB1 is the postcode, although the

cafe is not, as the '1' implies, in the centre of Cambridge, but a brisk walk from its tourist and traffic-infested centre. "I kind of liked the name CB1 because of the ham radio link,"

Daniel explains.

The aim is to create a place to meet people and play with information – a virtual extension of the bookish café concept. "I want to build a community focus and we have plans to develop some community information-type services – bus timetables and that sort of thing." CB1 also intends to create pages to provide starting points for specific academic disciplines.

Classes are held every week for Internet beginners and CB1 has linked up to a similar café in Chicago for poetry readings using full sound and vision.

It costs £2.50 per half hour to access the Internet at CB1. A standing charge of £7 per month (£35 for six months or £50 per year) gives you an email address and the right to use the screens at a rate of £1.75 per half hour. The food is standard student café fare and the capacity is 60. **Ian Scales**

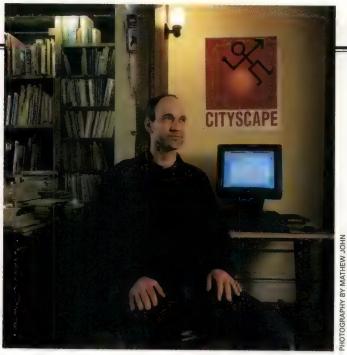
Details: CB1 is at 32 Mill Road, Cambridge CB1. Tel: 01223 576396 or email: sturdy@cityscape.co.uk

EXHIBITIONS

Internet World

Internet conferences are all the same, right? Academic, academic, bloke selling routers, academic, academic... Well, not at Internet World 95. At this conference, there'll be nary an academic on view for the whole four days, not because it's anti-academic, but because their time as Internet pioneers is passed.

OK, there are, in fact, several academics coming to the conference – and pretty important ones too. They'll be bringing news from the research community building the mechanisms we're going to need if the Internet isn't going to fall over a little sooner than we'd like. They'll



Daniel Sturdy with one foot in the book shop, the other in computing

be talking about VRML, HTML 3.0, IPng, 64-bit addressing and other vital developments for the 21st century. They will, however, be handsomely outnumbered by their entrepreneurial heirs, those men and women building the new Internet.

Highlights? Too many to name, but how about these. A keynote paper from Netscape's Jim Clark, newly crowned king of the Web browser market; speakers from The Guardian and The Telegraph plus INTERNET's own Roger Green, discussing the future for the print media; advertising professionals describing their formula for the interactive future; all the major players in the emerging online payment market; Microsoft's Judy Gibbons on how BillNet can enhance our networked future; Ivan Pope with home truths on the dream of The Daily Me: and a session on the WWW as a robust medium for online commerce in the next century.

A day of hands-on tutorials will also bring real world knowledge to bear on designing Web pges, the Internet for journalists, Internet access provision as a business, connecting your lan to the Internet and the thorny issue of security.

Details: Internet World is on from 16 to 18 May at the Wembley Conference and Exhibition Centre, London. Contact Michael Hislop at Learned Information (Europe). Tel: 01865 730275 or email: michael_hislop@learned.co.uk

Demo 95

It's hard to believe that just a year ago SCO introduced Mosaic to expectant crowds at Demo 94.

At Demo 95, just concluded, the Internet and the World Wide Web were not only well represented – with 20 exhibitors – but the source of much of the 'juice' flowing around the demo area and in the bar. It wasn't exactly Internet-with-everything but everyone there acknowledged that Internet connectivity and World Wide Web applications would be a driving factor in 95 and beyond.

Quarterdeck was there with its shovel load of Internet apps. I suspect the company has taken its new-found affection for Windows a bit too far – would you want to put a Web server on plain old vanilla Windows? Isn't there enough grief already with Web sites that are slow, erratic and just plain malfunction?

The ill-fated demonstrator of Common Ground, a platform-independent document transport like HTML, Adobe Acrobat or WP's Envoy, fell foul of the Internet gods and crashed and burned when his Internet connection failed. There is a lesson here for all of us.

In the words of the keynote speaker at the last Web convention, "This shit is almost good enough to use." Almost but not quite, it seems.

Common Ground allows a lot more flexibility for document formatting but, alas, may be fated to be an also-ran to the much more restrictive but well adopted HTML. With less oomph behind it than Acrobat or Envoy, it is likely to be very valuable but niche-y.

Everybody who is trying to put the Internet in a box was, inevitably, there, including Spry, Frontier and Netmanage. No one, however, has made it quite simple enough for the profusion of oddball modems and errant telecoms connections that exist in ordinary users' offices and spare bedrooms. From the tales that were being told, the perfect Internet-in-a-box solution comes with a PC and an engineer inside.

Demo 95 proved that the bright boys and girls in the software industry have spotted the fact that the Internet will be the next big thing. Given the level playing field of cyberspace, they may even have a chance to make money against Microsoft.

Paul Lavin

HAPPENINGS

Hip cats navigate the Net

Most of the 400 media types at an Internet exhibition in west London last month acknowledged that they were absolute beginners when it came to surfing the Net.

The classic Beatnik novel Absolute Beginners, which made North Kensington absolutely fabulously fashionable in the 1950s, has ensured that the area has a long-standing association with all things hip and groovy. There are now more than 200 media-related organisations in

the vicinity and representatives from many of them turned up to an Internet demo organised by North Kensington City Challenge (NKCC).

Naomi Troski, project development manager of the BBC Networking Club (http://www.bbcnc.org.uk/), gave a lecture about the Internet's potential and Mark Hughes, European marketing manager of California-based Silicon Graphics (http:// www.sgl.com) also spoke about the Net.

He commented later, "The Internet is changing the world and I really enjoyed talking to the children who came along, as they know more about it than most adults."

As a result of the event,
Thornton Streeter, manager of
Strange Attractions, the shop
at the centre of the fractal
universe, is now considering
setting up a Web site, and he
was advising those who want
more chaos in their lives to
check out the psychedelic
interactive site at http://
www.vis.colostate.edu/
~user1209/fractals/
mandel.html.

Tony Warren, MD of Esprit Music, chairs the NKCC media sub-committee which organised the event. He said, "Our aim is to establish North Kensington as the leading multimedia centre in Europe," because, he explained, "Media businesses dominate the area."

Gary Bones, NKCC media development officer, added, "The Internet can help small businesses communicate, and this event enabled our visitors to focus on multimedia in its widest sense."

Michael Thorne

ANYTHING LEGAL CONSIDERED - AND WE MEAN IT!

INTERNET is here to help you get the most out of the Internet, whether it's for business, entertainment or education. We want more people to use the Internet and to that end we're prepared to work with anyone, at any time, in any place, on events that promote wider use of the Net. Get INTERNET involved by contacting Roger Green, publisher, at rogerg@computing.emap.co.uk. At the very least, we'll publicise your initiative. Remember, the earlier we get involved, the more we can help.



Scene at Cyberia

hit the cyberbahn to join the Berlin Internet and Video Festival. An enthusiastic crowd of digital activists explored the latest creative Internet sites with keen European eyes to the future. This included cruises through Virtual Berlin and Amsterdam's Digital City, which invites citizen

participation in discussions on local issues and even provides online access to local politicians. Pan-European direct democracy begins here.

Berlin then repaid the visit for the First UK Internet Arts awards, held at Cyberia in conjunction with INTERNET. At this one-day artfest, traditional artists met their cybercounterparts and discussed ways to develop artistic ideas online. A panel of luminaries voted Jeremy Quinn's Virtual Night Club (http://www.easynet.co.uk/pages/cafe/vnc/click.htm) the best designed UK site. Congratulations Jeremy!

The Cyberlove event in early March packed the house for a discussion on the interaction between men and women on the Net. Women were warned to treat public areas like tourists visiting conservative countries – keep the skirts long and the tops high-cut or you might attract the wrong sort of attention.

Cyberia watched the G7 summit debacle aghast as it was resolved to leave Internet access entirely to free market forces. Internet 2000 (the joint series of events between Cyberia and INTERNET) is comitted to open public access and will do whatever it can to promote a democratic use of all Internet facilities. Cyberia's home pages (http://www.easynet.co.uk/pages/cafe/cafe.htm) continue to expand. If you're feeling in need of therapy, Fix (http://www.easynet.co.uk/fix/fix.htm) has a free, online counselling service courtesy of quirky quack, Doctor Professor Elektra. A quick visit to this surgery can be a real ego boost – especially if you're in need of assurance that, however bad things get, there's always someone else worse off! For a glimpse of the future, glean some guidance from Cyberia's resident astologer, Margaret R (http://www.easynet.co.uk/cafe/astro/astro.htm).

Maybe she can predict the outcome of the forthcoming debate 'Is copyright dead?'. Anyone interested in the future of copyright and the Internet is welcome, at 7pm on 11 May in the cafe.

Also on the horizon, expect to see three new surfing terminals equipped with the Internet Phone so, provided they're similarly equipped, you can chew the fat with your friends anywhere in the world, at no extra charge.

Yours, The Cyber Snooper

Details: Cyberia offers public Internet access, with help if needed, at 39 Whitfield Street, London W1P 5RE, for a mere £2.50 per half hour. Thrice-weekly training sessions are £25 for two and a half hours. There's a women-only session every Wednesday. Tel: 0171 209 0982 or email keith@easynet.co.uk

SURFING THE INTERNET-

WHO PAYS FOR THE PARTY?



Everyone knows what a buzz global communications are the world's an oyster, life is a party and surfing the net is a blast.

OUT OF CHAOS COMES ORDER

NOV*IX for Internet, from Firefox, exists because someone has to clear up the mess - usually in the form of paying for the damage. So if you have a LAN connecting to the Internet, let Firefox control the guest list - NOV*IX for Internet offers reassuringly tight management, control and security. With Internet communications it's better to poop the party than pay the piper.

For information call the Actionline on 0121 703 3020 or return the coupon by post or fax on 0121 703 3050





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How to ride the airwaves

John Elliot explains how you can take part in Radio 1FM's interactive music night

n Sunday 26 March Radio 1FM will be attempting to merge radio and the Internet in a three-hour interactive music night, and it looks like the station's going for a world record on how much you can pack into a short show. There'll be activity on air, on the Web and at London cybercafé Cyberia, and some of the highlights are:

- Interviews with major bands and recording artists, including REM, the Beastie Boys and Peter Gabriel.
- Perspectives from industry gurus and 20th century icons such as Terry Pratchett.
- Live on-the-Web magazine.
- A compilation eight-track 'virtual album' of unreleased tracks from major artists which you can download from the Web from midday on Sunday to midday on Monday.
- A free samples database download clips, mix your own track and then have it played on air.
- Live Internet Relay Chat (IRC) with Blur. The IRC channel will be #Radio1 at talk.doc.ic.ac.uk
- A live link to Cyberia where
 DJs Sure is Pure are holed up.
- Rob Newman describing his experience of being a newbie.
- A live session from Orbital, which will be transmitted to the studios via ISDN.

How to participate

For the latest preview of what's happening have a look at the show's home page on http://bbcnc.org.uk/online/radiointeract/index.html.
Here you'll find up-to-date details of the show, the samples database and lots of other information.

If you fancy yourself as a master mixer then download some of the samples and get editing. Your results can be uploaded to the BBCNC FTP server and the best will be played on the night. However, be careful about using other people's copyrighted samples and remember that by uploading you're giving the BBC permission to play them without any royalties.

You should also have a go at the NetBall game, not only for its cool graphics but to register and get your lottery numbers – you might win a super prize!

On the night, tune in and connect yourself to the home page so you can play a part in the media event of the year!

Technical know-how

First you'll need to get hold of the most up-to-date Web browser you can lay your FTP software on. The latest beta version of Netscape (1.1b1) is strongly recommended and you can download this from ftp://ftp.mcom.com/netscape

The next thing you'll need are the various applications (Netscape calls them 'helper applications') to be able to play the music clips. Most of the samples database is in AU format so you'll need to get an AU player - for the Macintosh get SoundMachine and for the PC try Wham - and don't forget your computer will also need a sound card. The virtual album is encoded in MPEG and you need a different sort of decoder to play these clips - Mac users should get hold of a copy of MPEG_CD and PC users need Xing's MPEG Player.

You can download all of the players you need from INTERNET's own FTP server (ftp://ftp.emap.co.uk) and the Radio 1FM Interactive home page also has links to other FTP sites with software.

To configure Netscape to use these player applications you need to select the Preferences command from the Options menu. Then in the drop-down box at the top of your screen select Helper Applications. Find where it says audio/basic and put in the name of your AU player. To configure the MPEG player you need to select New and type in the following info:

Mime Type: audio

Mime Subtype: x-mpeg
Extensions: mp2

Application (PC): xing_ply.exe Application (Mac): MPEG_CD File Type: MPEG

When you click on any of the audio clips they'll now play properly. If you want to save the clips to disk (and after a 30-minute download who wouldn't?) then on the same Helpers menu, configure Netscape to save the files to disk rather than play them – you'll then be able to listen offline.

You want to make sure you're connecting to the Net at the highest speed your modem can cope with – if you've got a modem that works at less than 9,600bps then it's time to treat yourself to that promised upgrade.

The tracks on the virtual album are around 3Mb each which will take about 30 minutes to download at 14,400bps. The sites with the virtual album will probably be heavily used so remember that old Internet maxim 'If at first you don't succeed...'

Tuning in

If you get stuck trying to access any of the pages or play the clips then there's a special Radio 1 Interactive helpline on 0345 60044 which will be available on the day of the show.

Radio 1 broadcasts exclusively on FM (which might be marked VHF on your radio) and is found somewhere between 97MHz and 99MHz, depending on where you live.

Point your browser at http://bbenc.org.uk/online/ radiointeract/index.html

What do you reckon? Is there any synergy between radio and the Net? Listen in and let us know what you think – comments to neile@computing.emap.co.uk. and if you want to give the producers in radio land your opinion then send mail to interact@bbcnc.org.uk

FEATURED WEB SITES

During the programme lots of music-related Web sites will be mentioned and here are some of their addresses

IUMA: http://iuma. southern.com/IUMA/ index.html

Megadeth:

http://bazaar.com/ Megadeth/

Mixmaster Morris:

http://inma.southern.com/MMM/ Musicbase: http://www.musicbase.co.uk

Pop Will Eat Itself: http://www.elmail.co.uk/music/ pwei/pweipage.html

REM: http://www.halycon.com/rem/index.html The Shamen: http://www.demon.co.uk/ drci/shamen/nemeton.html

Yello: http://newton.Space.NET/yello



@Messages

Don't just tell us how good the magazine is, let us know what you'd like to see in it. We also want to hear how you think the Internet should develop. Send to letters@computing.emap.co.uk

hat an excellent magazine – well done! The March issue is my first and I am currently reading it from cover to cover (with the odd skip).

Being new to the Net, questions about where to start, what to start with and what to do with it if I get it, have prevented me from even thinking about surfing. However, having partially read INTERNET I am now confidently sticking my toes into the water and expect to be standing within weeks.

Thanks for the insight and a great read on an interesting subject. Tony Morgan 100333.2400@ compuserve.com

Thoped for a little more depth in Michael Strangelove's discussion on advertising (March issue). His comment that most advertising is "woefully ineffective, mind bogglingly boring and uncreative" is grade A trash. UK advertising is probably the most creative and effective in the world. Companies as diverse as Haagen Dazs, Compaq Computers and Playtex Wonderbra have all seen massive increases in sales on the back of highly distinctive ad campaigns.

I see Internet advertising opportunities as encouraging a two-way dialogue between the advertiser and the audience. Currently advertising is essentially a one-way affair, but what if you could see a demo on your desktop? Careless and arrogant advertisers deserve their flames, but let's not be blind to a more positive vision because of arguments fueled by a 'guru' out to flog his latest book. Jason Ball Dowell & Associates London, UK

compuserve.com

Paul Lavin's piece on the legal obligations of an Internet service provider (March issue) was an incomplete, misleading and non-comparative analysis.

He wrote: "A reasonable T and C [terms and conditions], at least from the point of view of the service subscriber, would be the application of liquidated damages in the event of a documented service interruption."

Pipex Worldwide provides within its terms of service the following guarantee for its leased lines: i) at least 99.5% availability for its connection to a Pipex Point of Presence (POP); ii) at least 99.5% availability for any particular external network connection under the control of Pipex from a Pipex POP; and iii) at most one period of unavailability per day on average over a one-month period. If Pipex fails to meet these targets, the customer will not have to pay for the service for that month.

With regard to the other issues mentioned, no phone company can guarantee either availability or integrity for a voice or data connection (except where 'managed') to a subscriber on another network, a fact which is accepted by anyone who has ever made an international phone call.

As to any 'obligation to insure that the Internet works every time', what is the Internet? There is no generic service, rather a global agglomeration of providers using the same technologies and principles.

Pipex has always been quick to point out that communication with another site not serviced by Pipex may be compromised. David Mooring Pipex, Cambridge, UK david@pipex.net

feel you should have criven details of the membership costs of the IBM network with your tryand-buy version of OS/2 Warp. A list of local nodes might also have been appropriate. Jason Nevitt

J.Nevitt@europeanstudies.hull.ac.uk

Thought I should point out a problem I have had installing OS/2 Warp: I tried putting it on a DAN Multimedia PC with 2 IDE hard drives. One was 240Mb and one was 540Mb; I ended up having to custom install it after lowlevel formatting both disks.

The reason for this? 520Mb is the maximum IDE drive size that Warp will recognise.

IBM Customer Support told me I needed to purchase an Enhanced IDE Disk controller. Needless to say, I am unimpressed.

I'll continue to wait for Windows 95. It may have more delays than the Northern Line, but at least I know it's going to be 100% compatible. **Andrew Matthews** andy@andrewm. demon.co.uk

Newcomers to the Internet face a Catch-22 problem: queries are supposed to be asked via email, but if your query is about how to operate an email program, you are stuck!

The shareware provided by my access provider did not include manuals. Eudora's help file just gives an email address. Can you tell me where I can register Eudora and get the manual? Dr John Shaw Chichester, UK

Neil Ellul replies: The maker of Eudora can be reached by fax on 0101 619 597 5058. Hope this is of some use to you!

Back in the dark ages when I was young (and still had hair) I used to take part in what we called Postal Dippy, in which the board game Diplomacy was played by post, with the moves, results and various news items published in amateur zines.

It strikes me that the new 'Information M25' [I hope it's faster than that! -Ed] would be an ideal mechanism for just this activity. Running games this way would also cut down publication intervals from weeks to days.

If anyone is interested in getting this kind of thing going, please email me and we'll get it started. Paul Harper, UK. PAULH@icihq.demon.co.uk

Hi! I've tried .net and Wired. Then I saw your magazine and thought... 'Maybe...at LAST...there'll be something for us...' But no!

I run Internet on an... here's the key word...Atari Mega4. Virtually nowhere in your magazine is my computer mentioned. In this, you're no worse than the others. I'd like to find out which of you will be the first to support the development of software so that Atari owners can access the WWW too! What about an Atari column? Remember, we're not all game-playing morons. Many musicians use Atari for its Midi applications. Then there's Calamus etc. Surely, we have the right to be on the Internet too!

Let me know your thoughts please... (ingratiating smile...;)) All the best,

Earl Okin, London, UK spats@spats.demon.co.uk

Neil Ellul replies: Most of the magazine's content is aimed at all computer users, but we do intend to have specific articles on the more obscure models in future.

Thile I agree wholeheartedly with Mr Bryant about the high cost of ISDN for the private user (March issue), I must clarify

100432.601@

the cost comparison made between the KNX-IS Access server, which costs £1895, with the ISDN B1 card from AVM at "about £850".

The KNX-IS Access server is a device normally installed on a lan rather than at a home/private location where we would, usually, expect to see a single PC card. We offer two products aimed at the individual user, a CAPI supporting version of the ISIS card, which retails at £695, and the KNX-IS workstation which provides more extensive facilities, such as Multilink PPP, PPP and X.25 over ISDN with drivers for NetWare, Windows, OS/2 and, shortly, Unix, for £995. John Robson Commercial director

Neil Ellul replies: It looks like the Internet and ISDN are going to be closely intertwined over the coming months. See page 47 of this issue for a taster.

johnr@knx.co.uk

KNX

ongratulations on a most excellent publication! Out of all the mags this is the best laid out and easiest to read. But enough creeping. I am currently on a mission to tell the world about Feedback IT - the first World Wide Web magazine to come out of the University of Salford! It covers the latest in IT, computing and innovation. The URL is: http://www. salford.ac.uk/docs/depts/ iti/feedback/feedhome.html Steve, Editor Feedback IT s.m.cunio@iti.salford.ac.uk

was very impressed with the revamped issue of INTERNET. What did I like? The first thing that struck me was the clarity of presentation. The typeface and layout make for an easy read. I find this preferable to the vogue for 'pop' layouts which look trendy and detract from the content. (Oh God, am I sounding ancient?)

I would use the words serious, solid and



upmarket, to describe much of the content. This is what I want in order to use the Internet for business. There is enough information around about the various leisure activities available, so I found the article on ecash and the interview with Kleinrock particularly interesting.

Personally, I wouldn't wish to see a lot of 'how to get started' articles, which are adequately catered for elsewhere, although no doubt you want to 'get 'em while they're young'.

I like your 'anything legal' offer. It shows you are serious about this. How about a column of questions you don't know the answer to? Mags often

avoid this, but if you
published these you could
use your readers as a
resource – in true
Usenet style.
Nick Gassman

Nick Gassman nick@netwiz.demon.co.uk

Neil Ellul replies: That's a very good suggestion – all we need now are some questions we don't know the answers to :-)

would like to say that I consider the free OS/2 Warp CD supplied with the March Issue of INTERNET magazine a bad idea.

The magazine is supposed to be about the Internet, not operating systems. In any case, OS/2 does not seem a very good way to access the
Internet; why trash all your
existing applications when
there are plenty of other
ways to connect that will
run with your existing
applications?

If you want to give out CDs, why not put something useful for the Internet on it, like Netscape binaries or the Mosaic source?

Robert Dunlop rjd@neddie.demon.co.uk

Send your messages to the Editor, Neil Ellul, by email at letters@computing.
emap.co.uk;
by fax on 0171 383 5578;
or by mail to Messages,
INTERNET, Greater
London House, Hampstead
Road, London NW1 7QZ.

Instant Internet access - FREE

You can be online in five minutes with this month's great cover disk give-away

f you've a PC and a modem then there's positively no excuse for not being online with this month's cover disk. Featuring a sampler version of Netmanage's popular Chameleon software and 30 days' free Internet access from Leaf, there's all you need to get going on the Net.

The sampler Chameleon package has four applications, FTP, Telnet, Mail and Ping as well as a customise utility to set up the software and make your connection. If you've already got an account with an Internet access provider then you should be able to test these tools. If you're a newbie and still haven't signed on the dotted line, then for a month you can get full Internet access via Servelan and provided by Leaf. The only thing you won't be able

compatible modem with a minimum speed of 9,600bps. You should have 4Mb of memory in your computer and a couple of Mbs of disk space.

Installation's simple - just put the sampler disk in drive A and then from within Windows select Run from the File menu and type a:\setup. The setup program will ask you where you want the software installed and then it will complete the installation.

To configure Chameleon you need to start the 'Custom' application which you'll find in a new program group called Chameleon Sampler. Most of the information has already been configured for you. However, you do need to provide the following information:

From the Setup menu select



to do is send and receive email as this is only a demonstration account. To get email, you'll need to subscribe for a full connection.

The install

You need a PC running Microsoft Windows 3.1 or later and a Hayes

"It's good to surf.." A ten minute local phone call hours of surfing for less than

login and type in your login name - which is printed on the front of the disk - it will be something like lfdin99 - and the password which is access. Make sure you enter both of these in lower case and then press the OK button when you've finished.

From the Setup menu select Dial and type in the number of your nearest POP (see Leaf's Points of Presence box, right). Finally, make sure that the correct serial (COM:) port's selected. If it isn't, or the modern speed is set too high for your system then change them using the Port option on the Setup menu. When you're satisfied you've got all the details right, quit from the Custom

Connecting

application

settings.

and save the new

It's time to get online - to make the connection between your computer and the Internet you need to open the Custom application again. From the Setup menu select Log which opens a window so you can see what's going on when you connect you'll probably want to re-size this and put it somewhere at the bottom of your screen. Now in the Custom window click on the menu item Connect, your modem should dial and you'll connect. If nothing happens check to see that your modem is plugged in, switched on and that you've selected the right COM: port.

To test whether you're really connection to the Internet try using Ping to send out a "Hello, are you there" message to another computer. From the program manager open the ping application, then select the Connect option from the menu. Type in the IP address 193.128.73.200 (which is a domain name server) and press OK - you should see a reply come back within a matter of milliseconds.

Browsing the Web

What you're missing is a Web browser so why not try out your new found knowledge by using the FTP application to get hold of the latest copy of Netscape. Open the FTP application and then connect to ftp.mcom.com

You'll need to provide a user name - type in anonymous - and a password - type in your leaf account, eg lfdin99@leaf.co.uk

It's quite a large file to download but it's really worth it. If you're going to use a Web browser such as Netscape with Chameleon then you must copy the file WINSOCK.DLL from your \NETMANAG directory to the WINDOWS directory.

Problems?

FREE INTERNET ACCES

Servelan Internet Service

Chameleon Sampler
NetWanage (01483) 302333

If you can't get the software working or have difficulties connecting to the Net then you

Leaf's Points of Presence (Where to dial into) Birmingham: . . Bristol 0117 935 4123 01223 576101 0171 537 9757 Warrington:

can call Leaf's technical support line on 01256 707777 - just say you're an INTERNET reader using the Chameleon sampler for a priority response.

Like it?

If you think Chameleon's the best thing since Theakston's came in cans then you can upgrade from your sampler version to Internet Chameleon which also gives you a Web browser, a fully MIME compatible mail system and a news reader for £99. If you decide that you want to use Leaf's Servelan Internet access, it costs £15 set-up fee and £12.50 per month - for INTERNET readers who've tried out the sampler the set-up fee will be waived. Enquiries to Leaf on 01256 707777 or email sales@leaf.co.uk

Neighbourhood. watch

IVAN POPE

writes...

Web pages are as versatile as the

omputers they sit on: they can sort, search,

register, even wave robotic arms. What's on

WWW servers at the moment is restrained only

by people's imaginations.

he two main strengths of the WWW are its simple front end and the ease with which anyone can write pages from scratch using little more than a text editor.

The joy of putting together pages and allowing anyone in the world to see them has proved immense and infectious, adding to the wildfire spread of the Web. The speed with which commercial software houses have moved to offer HTML tools shows that they see this as an important area – it can't be long before all wordprocessors have an HTML area and probably a browser as well. Microsoft is already going down that road.

But no matter how good pages are and how fulfilling producing them is, there is only a limited range of options and pages quickly end up looking the same. They are either corporate and dull, whacky and exciting or a mix, but essentially they do the same things and provide the same sort of result.

The sites that are really offering value have started to develop 'Web engines' which operate behind the scenes. These can be divided into several types: search; registration and response; remote control; and database. It is already obvious that this is the way professional Web development is going, so, as it should, the Web is beginning to exploit the vast power of computers.

Search engines are the most useful Web sites as finding things on the Web is otherwise a matter of pure luck. They have been evolving along with the Web and there are a number now to choose from, though they vary in their efficacy.

Netscape lists all the main ones at http://home.mcom.com/home/internet-search.html, displaying a very useful rating system which shows how many hits (ie finds) each search engine came up with on a given word. The Lycos engine found 435 documents with the word 'surf' in them and this makes it the top search engine on Netscape's list. However, this doesn't make it the most useful – you could also check out Webcrawler, the Jumpstation Search Page and Nikos, among others. ArchiePlexForm also allows you to make Archie searches for files across the Net.

The Web is just starting to exploit the vast processing power of computers

However, Netscape has recently settled on Yahoo as its search engine of choice, for obvious reasons. Yahoo is an incredibly well presented search-and-catalogue system run from Stanford University in the US at http://akebono.stanford.edu/yahoo/. With Yahoo you can search in subject categories or by using the search engine, which generally works well for me, though it tends to be a bit undiscriminating.

But Yahoo has almost been a victim of its own success with recent enquiries of, at latest count, over six million a week, causing it to hurriedly upgrade its server and connection. An area that wouldn't seem interesting or new to users of bulletin boards is registration and personalised services. For some reason, the Web is only now coming round to the idea of sites that allow users to register their interests and to receive personalised treatment when they visit.

Although this is a simple system to build and operate, the potential is huge. Registration of users enables providers to offer paid-for services, controlled services, plus tracking of visitors and what they use services for. Some may find this an intrusion but it seems a perfectly reasonable demand in return for access to resources.

As long as service providers don't abuse registration systems, there shouldn't be much objection...However, I recently visited the Macmillan site and asked for information in a number of subject areas. I later received a stream of email informing me that I'd been placed on a mailing list for each subject area – a monstrous way of locking me into an endless junk mail flood. As the site never mentioned mailing lists, it seemed something of an abuse.

Webhound, located at http:// webhound.www.media.mit.edu/ projects/webhound/, is a document system which provides you with a personalised Web agent that periodically or on demand recommends new documents based on the topics you have shown an interest in. It allows you to submit your entire browser hotlist and you rate any documents it sends you from one to seven, Webhound then uses a background filtering system to automate a 'word of mouth' process, recommending new documents to you based on other recommendations from other users.

Remote control sites offer the chance to control, interact with or operate mechanised systems across the Web. There is a range of these sites, including the Mercury project at the University of Southern California, which can be found at http://www.usc.edu/dept/raiders/. This allows users to operate a robot arm moving over a terrain filled with buried artefacts. A camera and pneumatic nozzle mounted on the robot enable users to select areas and direct bursts of compressed air into them, thereby 'excavating' them.

Although it's slow, it is a thrill operating a mechanical system situated on the other side of the world.

Similar are Australia's Tele robot at http://telerobot.mech.uwa.edu.au/; the Bradford Robotic Telescope at http://www.eia.brad.ac.uk/eia.html; and NYU's Original Labcam at http://found.cs.nyu.edu/egi-bin/rsw/labcam1.

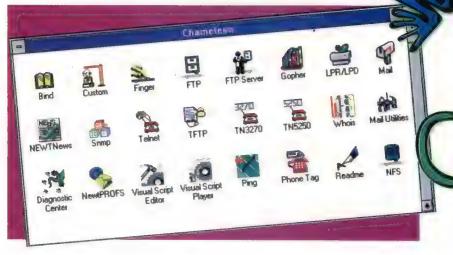
Ivan Pope is the author of Internet UK and a director of Webmedia, a project development company.

Windows PC users can have full Unix TCP/IP access too.





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Chameleon is a TCP/IP Windows software suite that offers more applications than any other product. It provides you with a comprehensive Windows solution for TCP/IP networking.

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Phone Tag

Windows interface to IBM

PROFS mail

Internet Access

Gopher

Newsreader

Whols

Network Utilities

Ping

Finger

DNS Client and Server

Networking Tools

TCP/IP Stack

Diagnostic Center/Trace

Agent

Custom







Sept. 1994



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DANIEL DERN

writes...

You may have read that the US Government

owns and runs the Internet. That used to be true

for much of the original backbone and

infrastructure in the USA — but it isn't any longer.

It is now a user like the rest of us.



t present the United States Government's (USG) role is basically the same as the rest of us: a mix of user and information provider.

In terms of 'providing' or 'running' the Internet, even the US portion, the USG has pretty much stepped out of the picture.

This is a big change but not a surprising one. To see why, let's take a quick tour through the past 30 years of Internet history - please bear with me.

In 1969, the United States' ARPA (Advanced Research Projects Agency) was seeking a way to let ARPA-funded researchers at multiple locations in the US access each others' computers. Packet-switching – proposed as an alternative to matrixes of point-to-point telephone lines - looked like a good solution.

ARPA funded the development of the hardware and software and so evolved

There's still some **US** Government money going into the Internet and its funding helps keep behind-the-scenes bodies such as InterNIC working

the Internet precursor, ARPANET.

A decade or so later, packet switches were a commercially available product, and a few commercially available public packet-switching data networks sprung up. Meanwhile, ARPANET continued its growth and, before long, the Internet was born.

At the end of the 1980s, the USG this time in the guise of the NSF (National Sciences Foundation) needed a high-speed network for its researchers. And so the NSFNet was built for use by NSF-related parties. Meanwhile, other agencies such as NASA, the Department of Energy and the Department of the Treasury, had built or were building networks for their own needs. The NSF encouraged regional 'mid-level' networks to be created for regional networking and as an intermediary access 'funnel' to the NSFNet.

Use of these networks, especially the NSFNet, was restricted to appropriate organisations by AUPs (appropriate usage policies). Email could flow across the NSFNet, but non-NSF-relevant users on one network couldn't make connections, for example to Telnet (to login remotely) or transfer files (FTP), to a destination on a different regional network, through NSFNet.

Commercial IP' network providers began springing up, while existing mid-level and regional networks turned into commercial entities to accomodate the non NSF-related ones. To undo the NSFNet's Balkanisation of the Net they began interconnecting among themselves, first by individual agreements and then increasingly through common 'meet points' and

agreements to exchange traffic. This became known as CIX (the Commercial Internet eXchange).

The 'commercial Internet' grew apace. By the early 1990s, the NSF no longer needed to run its own network; it could outsource it to reliable third parties. Today, the NSF does not need to do even this. Internet connectivity and service is widely available as a commercial, off-the-shelf commodity and so the NSF provides its communities with network service in the same way it provides them with electricity, telephones, water and other facilities.

As planned, the US has thus gotten out of the business of operating networks for their own sake. The USG still runs a number of dedicated networks - gigabit testbeds, classified military networks and so on - but in terms of the network as we know it, the USG portion comprises a collection of commercially-run networks, which includes companies, colleges and public access sites.

There's still some USG money going into the Internet: funding helps keep behind-the-scenes bodies like the IANA (Internet Assigned Networks Authority) and NSF InterNIC (Internet Network Information Center) working, although these are becoming self-funded.

There are also the USG-funded meet points like the network access points and the Federal Internet exchanges, plus there are one-off grants for Internet projects and services.

However, overall, it's estimated that the money spent directly by the USG is perhaps one per cent or even less of the total 'Internet budget'

Ironically, the USG, along with city, county and state governments and agencies, is making more use of the Internet than ever. Departments galore are plugging in as users. They are also opening up virtual mountains of information via the World Wide Web, Gopher, FTP and Usenet.

For example, the Smithsonian Institute and Library of Congress have information servers, as do dozens of government agencies.

It's possible to browse Supreme Court decisions, get tax forms (not necessarily current ones) and agricultural bulletins, and much much more, not to mention hearing Socks, the First Cat, meow.

Other governments are gradually taking a similar path, starting with network funding as needed and giving way to commercial projects as circumstances allow. But as it is, the Internet is now an international success and the USG is only a part of its story.

Based in the US, Daniel Dern is an Internet analyst and a regular contributor to Internet World, His address is ddern@world.std.com

Attitude_ problem

PAUL LAVIN

writes...

Mindless overuse of Internet bandwidth is seriously slowing down connection speeds for those of us that need to make a living out of it.

But hey, I'm a reasonable man — all I'm asking is for everyone else to just get off.



ight, cyberheads, enough is enough. You saw the Internet on TV, you read the fawning articles, you thrilled at the porn

and, for all I know, you even got your mum into the idea of rec.gardening, but no matter what turned you on to the Net, you must have then grasped the essential next step in human evolution: homo connecticus.

So you went out and did what was expected of you – got a modem, plugged in and blasted onto the Infobahn – and you started sucking bandwidth like there was no tomorrow.

Alt.binaries.pictures.erotica (and its various sub groups) is consistently one of the top ten most accessed newsgroups. In terms of bandwidth used, it's got to be the champ, and it's statistically probable that you, dear reader, are a regular. What is it with you people? Are you seriously priming yourselves to be the next Hugh Hefner or Bob Guccione?

Meanwhile, WWW fans are grooving on .wav files installed by indy bands which are using the Net to advertise their wares on the cheap. All well and good, but wouldn't Virgin Records or the radio be more appropriate thrash, providers? No one should underestimate the amount of bandwidth that can be saved for better purposes by a tranny or a new CD.

You used the Internet to keep tabs on the World Cup, for goodness' sake! Weren't the TV and every single newspaper in the land enough for you? Sun, to its eternal discredit, didn't help matters much by putting a 14 Mb MPEG video clip on its World Cup home page – without forewarning anyone of its size. I'll bet a fair few Windows drivers went for that one on their .edu account, but then, what's 12 hours of download if you aren't paying for it?

What I say to all of you is: stop it now! The Internet is serious business, especially for business people like myself. I have been using Internet email for at least five years and did my apprenticeship on the Net on a Unix box, no less. The first Web browser I used was running on an NCD X-terminal, not some multimedia Dixons Doomblazer. I'm sorry to cut short your playtime but the people that have paid for this fantastic communications capability with their own money, effort and understanding are getting fed up with waiting in line.

I have been unable to log into Demon's news server for over a fortnight. I can't even get through to its helpline. Emails have only generated an

I suspect that the 'lifestyle' Internet users are blowing it for everybody else, and before you know it, price increases will start

apology that the server is too busy to accept connections, and my attempts to connect have not been confined to the post-6pm rush hour either.

CityScape is staggering under the load, too, but at least I can connect to its news server, although the performance isn't what it used to be. I know that every pound that isn't nailed down is being spent on building up capacity.

The PC User Group is also suffering. It put a trial disk on the cover of What Personal Computer? and was virtually uncontactable for a month. Even now, some of my mail is mysteriously delayed or MIA, and this is despite money being constantly plugged into lines, servers and disks.

Tried to use Compuserve's Internet service yet? What a depressing activitiv. You'd have thought the big C would have sorted its bandwidth problems out by now.

Even the mighty Pipex is straining to meet demand and having trouble hiring the network bods to keep everybody happy. Every time I talk to one of its technical staff (I can at least get through on the phone) I get a sense that its collective knickers are getting twisted tighter and tighter.

Has everyone's mail server had a meltdown in the recent past or is it just me? I suspect that the 'lifestyle' Internet users are blowing it for everybody, and before you know it, the forces of capitalism will take advantage and price increases will start. That's a slippery slope. There have been discussions among the commercial Internet providers that usage will have to be metered, so instead of the current flat fees, you will pay by the hour, minute or second or even pay for distance.

As a business person on the Net I am not too worried about paying for what I use. Hey, I can just up my fees to INTERNET to cover the cost of submitting articles if my Internet bill gets too high. [Come and use our direct connection at weekends instead – Ed.]

Still, the possible prospects for payment are intimidating. It's really no good restricting hobbyists to some imaginary 'off peak' period, for example, as the Internet revolves around the concept of the 24-hour world. My 'off peak' is California's prime time.

What's needed here is that rarest of human virtues: self restraint. If Netheads can't rein in their promiscuous use of bandwidth, then mechanisms will be created by the commercial users to force them to do so. Then maybe the Net pleasureseekers among you will understand that your welcome on the Internet is in exact proportion to what you contribute towards its running and development.

Paul Lavin is editor of Info Highway.

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Please send me a Unipalm product catalogue

In return for a bargain Internet connection he made a pact with Demon. Tim Dawson - a man well and truly possessed – tells his tale

of presence uncontactable. However, I am the real architect of my frustration. I thought I would effortlessly cruise into cyberspace and hadn't anticipated it would be the infobahn equivalent of a fell-running marathon in the fog.

DEMONIC INTERVENTIONS

I knew, of course, that I needed an Internet address. In my mind's eye I had already apportioned space either side of an @ to go on my business card but a 'node name'? At first the Demon saleswoman and I proceeded on the assumption that I was selecting just one unique eight-character name to go before the @. I hadn't considered this and desperately wondered if I should emphasise my surname - tight-assed British style - or my first name - freewheelin' West coast style.

I made suggestions and she checked them on a computer to make sure they were not already in use. Only after I had devised a formulation did she realise that the node or domain name comes

hotline worse than useless and its points

I tried to download the software I needed - it took five hours of my life

after the @, but by this time a contraction of my full name timdawsn was entered on Demon's computer. "To change it now," she informed me apologetically, "will cost another £12." Already I was stuck with an Internet address - tim@timdawsn. demon.co.uk - that seemed unlikely to add the anticipated cachet to my calling card.

HOPE SPRINGS ETERNAL

When I tried to download the software, Demon appeared to me in its true colours. In all it took nearly five hours. My comms package was wrong, the online advice unhelpful, connections kicked out after an hour, and the final download took nearly two. If your modem is slow, use the post. Even with a faster modem, the Royal Snail might save you time to start off with.

Demon's download unzipped into a small forest of subdirectories. Among the executables were 11 text files. I couldn't hope to take in so much information. Software history, every modem in Christendom and dialup protocols were copiously covered. However 'Connecting to the Internet in ten easy steps' did not appear on the cyber shelf. Too impatient to read them all, I just wanted to dial up.

At nights I still hear my computer endlessly trying to connect to the Edinburgh POP. Tone dial - silence, tone dial - silence, like a torture designed to unhinge me. Sometimes the connections never came. The experience with other POPs might be different, but I suspect Demon is growing so fast that you may not get first-attempt dialups anywhere.

When eventually I got though and saw the Net> prompt on my screen, I was jubilant. It had taken me seven hours of concentrated effort and I had no idea what I was going to do now but I was on the Internet and that was enough for me. Tired but happy, I left Demon alone for a few days.

AWAITING A SAVIOUR

Only after I had printed out a 90-page Demon manual did I give up on the documentation. It is not altogether useless, but without other guides you will get nowhere. I eventually bought The UK Internet Book by Sue Schofield (Addison-Wesley, £19.99) which was some help. As far as Demon's helpline goes, it was engaged solidly for hours and hours on end. I've heard other users have given up on Demon altogether because it's always unavailable.

Demon I was eager and full of enthusiasm - I didn't know it would take me to hell and back

he name should have given it away. "A malignant being of superhuman nature: a devil," says the Oxford English Dictionary, and oh how true that is. To connect to the Internet what a terrible pact I had to enter into - I did a deal with Demon.

The magazines and books I flicked through were big on the benefits, and all tried to explain how I could join, but none gave me any idea of quite how difficult it would be.

Just so you know where we stand, I am a freelance journalist. For the last ten years I have enjoyed using a computer and, although I don't usually write about science or technology, it excites me nevertheless. I use a 486DX fitted with an internal fax/2,400bps modem card and I regularly use other comms facilities such as Compuserve.

My modem, I know, is slow. Two years ago, when I bought it to replace a hangover from computing's steam age, high-speed comms weren't in vogue. For downloading a few thousand words of copy it is fine. For the Internet it is like doing a hundred-yard sprint in wellies.

Demon was the obvious choice to hitch me to the Internet. Good reviews and that 'tenner a month' tariff clinched it. So, decision made, erect credit card in hand, I dialled up Demon. With the weekend ahead of me I imagined I would have visited cyberspace's darkest recesses by Monday.

After days and weeks over a hot keyboard I am still on the nursery slopes. Demon must take some blame. Its software can be unfathomable, its

During one early session the message 'NFS server disaster OK' flashed up. Yeah, OK. Then nothing for a couple of minutes. Typing Enter or Escape had no effect so, assuming the worst, I pulled out the phone line. I still have no idea what an NFS server disaster is, or indeed what any of the other warning messages mean, but what I have learned is that Demon works slowly. More often that not it is better to wait and see than to disconnect and it seems to put itself right if you are patient.

THE EMAIL MIRACLE

A few days after my first successful logon, friends started to send me mail. Sure enough, my mail automatically downloaded to my computer. At last it seemed that my effort was worthwhile and I cheerily replied using the Demon offline mail software.

Later it transpired that I had not configured this properly and my mail appeared to have been sent by an imposter called Fred Bloggs. In despair I tried the helpline again, but this time help was available and invaluable. In no time at all I reconfigured my software and was instructed in the art of sending text files using email.

Once mastered, this is a doddle. Text files do get a bit jumbled en route but it is still better than fax. Within days I was filing copy to newspapers and magazines using the Internet. I was happy. Of course it had dawned on me that all the techno-excuses for missed deadlines were now used up but I soon found that if email is mis-addressed it takes up to three days before it's returned to sender. I can already hear myself telling editors that my copy is lost in cyberspace.

SPREAD THE WORD

Without asking, Demon software automatically signs up new subscribers to a dozen or more newsgoups. After a



Older and wiser, I am now on the Internet, and yes, despite everything it was just about worth it

fortnight, this became a problem. As soon as the Net> prompt appeared, a message flashed up to say that a number of news stories were downloading. Hundreds and then thousands of articles were about to appear on my hard disk, I was told. At four thousand I decided that I'd had enough. I typed Exit and logged out. And on my hard disk? Nothing. I logged in again and the same thing happened.

This was another case for the helpline. "Remove all the newsgroups to which Demon automatically signed you up," I was told. Once I had done this only a few pieces of news were downloaded automatically each time I logged in. I tried a few of the real newsgroups, but after a week I had not

gleaned a single useful piece of information, so gave up on them.

THE GREAT BEYOND

Internet relay chat is easy to operate and gave me the feeling that I was truly connected to the world. At the Netprompt I quickly learnt to type Telnet irc.demon.co.uk and follow the instructions. Then choose from 2,000 channels of inane chat and sexual fantasy offered by male US students.

As for everything else, I have meticulously followed Demon's instructions to transfer files by FTPing to no avail and Gopher, Archie and the WWW remain undiscovered pleasures.

Whether my effort will be repaid, I cannot yet tell, but I'm hopeful. I don't really blame Demon. Arrogantly I assumed that the Net would be as easy to master as modern software. It is not.

If you do go for Demon, one final thought: I now suspect that the company's name is a product of clever legal advice. If a customer brought a case against it under the Trade Descriptions Act, it would have a defence already prepared in the OED.

Now he's on it, Tim Dawson may start writing about the Internet, but he usually covers politics and education.

MHERE ALM MENA MROHG

- As Tim admits, a 2400bps modem really isn't up to cruising the Net. It's fine for accessing text-based services but to download Megabytes of files and images he'd be better off with a 14,400bps modem around £150.
- modem around £150.

 Demon's software should say why a connection failed. 'Busy' means all lines were engaged; and 'No carrier' means the phone didn't answer. The latter could be a
- problem wait ten minutes and call the helpline.
- Tim's brush with the 'NFS server disaster OK' shows there was a problem with Demon. He was right to disconnect the phone line.
- The newsreader problem is indeed best bypassed by removing all except for demon.announce, where maintenance notifications and all those priceless apologies appear.
- Tim's FTP problems could have a number of causes. You type ftp to start the FTP client. You must then say where the file is, so you type Open followed by the name of the FTP host. Demon's own FTP server, ftp.demon. co.uk, is always a good place to start. Then type anonymous for your login name and your user or host name for the password. In Tim's case this is timdawsn.

Driving the fans wild

Erasure keyboard junkie Vince Clarke is mad about the Net, but it's a two-way thang because his fans are crazy about it too. **David Pitchford** joins the mutal appreciation society

Somehow it's no surprise that Vince Clarke is an enthusiastic about the Internet. He is, after all, the first man to introduce digitised music into mainstream, non-cultish (aka Gary Numan) pop. And with that background it surely takes only the tiniest of conceptual leaps to appreciate digitised text, pictures and a worldwide digitally-connected fan club. "I've been on it for about six months," says Vince. "I use it for email and information most of all; and we use album producers who are based all over the world." He is also reported to use it in his quest for old computers, which he collects, and he adds, "I'm a subscriber to Analog Heaven [a BBS] where I can get info and facts on keyboards." Vince has proved to have an instinctive feel for what will and won't take off in the world of electronics and music, and of the Internet he guardedly says, "I know people are keen to sell music over the Net but



Erasure's Vince Clarke – he's a regular emailer and uses the Internet to track down old computers, which he collects

I'm not that excited." So, nor is it surprising that Erasure's (and as it happens Vince's first band, Depeche Mode's) presence on the Internet has little to do with Vince personally. In fact the pictures, interview transcripts, logos, Midi files, sound files, not to mention a rather handsome browser (of which more later), result from the efforts of countless fans and one Daniel Miller, the forward-thinking owner and founder of Mute, Vince's record label. 44-year-old Daniel first put up a band-busy Mute server at his New York base two years ago and the success of that moved him to transfer it to the UK last year. He's a great fan of the Net but he has been involved long enough to view

it with a veteran's eye. "It's a tool and nothing else...it's nothing really more – for now. It's the ideal way to exchange information and I see it as a useful way for fans to communicate with each other." This is something of an understatement. Erasure fans do more than communicate with each other.

Commune is a more accurate description; in terms of volume alone the band must have one of the most attentive followings on the Internet, with at least



Not always to be found welded to a keyboard, here Vince and Andy Bell, other half of the Erasure duo, take a friend out for a spin two major Web sites (check out http://www.cec.wustl.edu/~ccons/erasure/ for starters), numerous FTP presences (ditto http://www.wit.com./mirrors/music/) and a Vincent Clarke mailing list which sees around 40 new postings a day. (Send an untitled message to majordomo@tcp.com containing the words subscribe vincent-clarke [your email address]). There's also a chap called Ernie from Albuquerque who maintains an 88-page Vincent Clarke discography – available through the Web sites – which even Mute Records is reputed to consult from time to time.

"Its good to have fan-driven sites," opines Richard Bell who maintains the Mute Records site "They

"Its good to have fan-driven sites," opines Richard Bell, who maintains the Mute Records site. "They then have complete freedom to say what they want. On our own site, obviously, they don't feel quite the same freedom, but on the other hand we are the authoritative source of information. If someone wants to know for sure if a tour is going ahead, we can tell them."

"People are advocating the Net as something trendy or special. It's not – it just serves a use"

In any case, the Mute Records site warrants a visit to play with its TeleFinder browser. Mutelibtech.com (aka Mute Liberation Technology) is not a Web site, though one may be forthcoming later this year. You can either FTP or Telnet to it but with the free copy of Telefinder downloaded from the server you get a charmingly user-friendly Web-like display of what's on offer: an IRC-aspiring chat room, forums (ie discussion groups) for each of Mute's 30-plus bands; interviews, photos etc from the artists' lisings; your very own mailbox for use with other readers, plus Mutebank from where you can order Mute CDs, LPs and shirts. Mac users get the added thrill of customised icons plus occasional sampled jingles when, for example, they leave the chat room.

Erasure Information Service (EIS) supremo Janet helps run the Mutelibtech site alongside Richard Bell, and hers is often the message which springs up onscreen when you first dial in with TeleFinder. This is only fair considering that while the Erasure Forum fields only five or so messages a day, it and the Depeche Mode

Frasure Forum fields only five or so messages a day, it and the Depeche Mode Forum account for three quarters of all messages to the site. And anyway, Vince personally bought Janet her modem, got his roadie Mike 'He reads the manuals' Hall to get her hooked up and also pays the EIS monthly online bills.

have got things wrong so I can put the

Janet laughs, "Vince reads the messages and sometimes has a laugh at them. He also tells me when people

record right. "For example, two weeks ago he heard that he was supposed to be going on radio in San Francisco. He told me so that I could tell everyone that this wasn't going to be happening." But Vince also appears to respond directly sometimes; a message of his from his eponymous mailing list rapidly found its way to the Erasure Forum the next day ("The [next album's] music will be electronically generated (no...really?)"). Richard Bell, the Mute site sysop, says, "I think the Internet is a logical extension of Vince's interests. I also

"I think the Internet is a logical extension of Vince's interests. I also think there is a direct link between electronic music – and its fans – and an interest in technical things, which has to include the Internet."

But the Mutelibtech site remains resolutely for fans, not for Nethead techies. Here are discussed the finer points of Andy Bell's singing range (does it go beyond that of your average

baritone?), the tedium inspired by the latest remixes and the

artistic integrity of the last album's videos.

Unlike other music sites, Mutelibtech is likely to evolve slowly. Mute owner Miller says, "I know people are saying the Internet is going to change this and that, but I prefer to experiment with the possibilities." The hype washes over him entirely. In fact, he is far more concerned with the possibility of the Net evolving into an elitist way of distributing information. "People are advocating the Net as something trendy or special. It's not – it just serves a use."

So if you're hanging on for the day when Erasure's latest album is only available online and not in HMV, you'll have a long time waiting. As Daniel points out, "I don't like it that you can get certain records or products on the Net and anyone without access is left out. I hate that."

Mute Records' boss Daniel Miller – a Net veteran

David Pitchford is a freelance journalist and occasional contributor to INTERNET.

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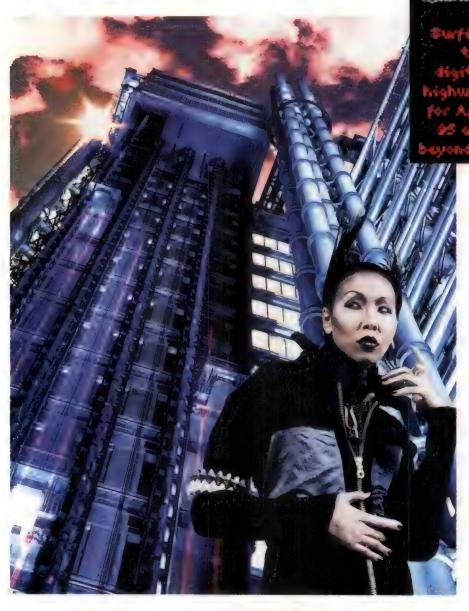
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Case studies.



NEW CLOTHES TAKE TO CYBER CATWALK

FASHION

ook deep into Griffin Laundry's future world of cyberspace and virtual living and surf the digital highway for autumn/winter '95 and beyond." So goes a bold marketing statement from a rather bold, marketable designer menswear company which has just gone online with 30 pages of 'reality fashion'.

Griffin Laundry was set up just over a year ago by designer Jeff Griffin and his partner Nick Hart. Nick supplies the business nous while Jeff, an MA graduate from St Martins School of Art and one-time designer for Valentino and Ferre in Milan, creates the clothes. The Griffin Laundry manifesto presents a range of clothes "for urban living where function and performance are held in equal consideration to fashion, design and aesthetics". What that means is a wearable collection of tailored, yet relaxed, practical, hardwearing men's clothes designed with the future in mind.

Fabrics range from modern microfibres and techno-fabric mixes to quality lambswool, cotton ribs and fleeces. Shapes are inspired by combat clothing, uniforms and workwear, while colours are a combination of bright neons and gunmetal greys.



An inspirational concept, and as a piece of aspirational advertising it hits all the right buttons for every stylish, urban young man streetwise enough to be on the Net. But Griffin Laundry's appearance on the Web wasn't the result of detailed market research. Jeff explains, "I've just got quite a few friends who are really into the Net and I got excited about what they were saying, where they were coming from... The fashion industry is so behind and it has totally freaked all the fashion journalists."

You can't yet buy any of the clothes on the Griffin Laundry pages via the Net but this doesn't seem to bother Jeff. He says, "We're really just trying to get out there...for people to get in touch with us, tell us what they think." However, within in a few months the company hopes to have this sorted because selling direct to the customer makes good business sense. "If we make a garment for £50, a shop puts 260% on that. Selling it through the Internet, we can sell it for £50."

Soft Options helped design the Web site using sophisticated styling, smart photography and graphics and bite-sized chunks of ad speak. Download time is always a problem, but if you fancy some 'performance outerwear' or a 'virtually useless' T-shirt, then Griffin Laundry's futuristic collection is worth the wait!

To access the Griffin Laundry site go to http://www.demon.co.uk/griffin-corp/

Tamsin Hughes



Above and left: donate your anorak to Oxfam – this is undoubtedly what the well-dressed surfer will be wearing this season

FANTASY BOOK FULFILMENT ONLINE



RETAIL

ean Schroeter is an unlikely technological pioneer, even though her Future Fantasy Bookstore in Palo Alto, California, is probably the most famous site on the WWW. "Techno-logical pi-o-neer?" she says. "Computers are run by dragons and wizards. Does that tell you anything? I'm totally worthless on a computer.

"One of my customers came in and asked me if I wanted to go on the Internet and, having no idea what he was talking about, I went 'sure'. He said I could get more exposure. It is not something I would have thought of for myself."

That conversation happened in December 1993 and the customer was Glen Truewitt, a researcher at Digital. Three months later, the Future Fantasy Bookstore was online and life hasn't been the same for Schroeter since.

She soon appeared on NBC TV and the cover of *Computer World* and bluffed her way through an Interop Internet convention. What seems to have impressed her most, though, is having her photo seen by Al Gore.

When Schroeter and her husband Rudy bought the Future Fantasy Bookstore in 1985, it had been selling sci-fi and mystery books for six years. The Schroeters moved it to its current 1,400 square foot premises in 1991 and added statues and jewellery.

Today's best-seller is the Darwin fish bumper sticker, an evolutionist's version of the Christian fish stickers which are so popular in the States. Books by Terry Pratchett, Robert Jordan and Neil Stevenson are also favourites.

Schroeter says the store was chosen for one of Digital's commercial experiments principally because of its clients. "If anything's broken around here, you put the dead computer out and it's fixed in 10 minutes. That's my customer base around here."

However, despite the press coverage which the Future Fantasy Bookstore's eye-catching home page garnered, it took a month before the first online order came in. The shop makes about a hundred sales a day and 10 to 15 of these are now via email.

Americans tend to use the Internet site to buy rarities, while foreign requests are dominated by Scandinavians seeking English language books. Glen Truewitt comments that for every hundred people that browse through the store's pages, less than one of them buys. However, Digital is more interested in using the site to improve Internet presentation than to generate business. Encrypted credit card transactions may come, he says, but aren't a priority.

While the computer giant administers the Web site, the bookstore on El Camino
Real has remained very much a family-run affair.

When INTERNET rings, Schroeter is sitting in jeans and T-shirt and is alone in the shop with her two dogs. She is packing books and

her two dogs. She is packing books an doing paperwork. "I run a bookstore...and then there's these

computer things. Glen calls me Ferengi," she says, referring to the mercenary Star Trek shop-keepers.

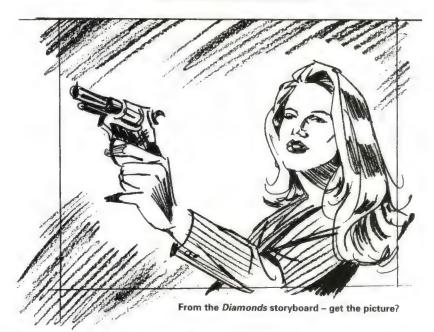
Nevertheless, going online has meant some concessions to technology. Schroeter has had to buy a fax and now gets up at 6.30am to answer email. She even wants to get a modem to relay lists of new books to Digital, rather than having to take disks over in person. "I actually do know some commands that make computers work," she adds. "Ctrl+Alt+Del works real well."

The Future Fantasy Bookstore is at http://www.commerce.digital.com/palo-alto and can be emailed at futfan@netcom.com

Sarah Johnstone

LOCATION — THE WORLD WIDE WEB

FILM PRODUCTION



nline since January, the world's first interactive film production company is the brainchild of Greg Tallent, a man with a name straight out of *The Player*. He explains, "More and more of the world's business is moving

towards entertainment...We want to make entertainment and money," besides which, "Film production is exciting."

Making Movies (http://www. makingmovies.com/tallent) is a subscription service which lets you buy into the glamour of the film industry. The pitch is that for £30 you get a piece of the movie action; the chance to be involved in the creative and technical aspects of making a film.

Subscribers are entitled to script and storyboard notes. After pre-production they get details on casting, locations, wardrobe, music and shooting the film. Finally there's post-production, the finished print, theatrical distribution and the crucial question of where to hold the

premiere party.

Making Movies has three projects currently in development. Devised by Greg, Bill Anderson and Roger Tucker (two director mates) they're strictly in the adult thriller mould and aimed at boys aged 15 to 30 – "the kind of people most prevalent on the Net," says Greg.

Diamonds is an LA noir about models and ex-models; Entrapment is a New York thriller in much the same vein; and Cyberdrive is a London-set scifi pic about espionage on the Net. Email suggestions from budding Scorseses may well end up in the final film, although it's not a creative free-for-all as copyright dictates that unsolicited contributions are paid for if used.

Subscriptions are going well but, having already raised enough cash to take the first film into pre-production, Greg doesn't regard subs as a major source of finance. "People aren't too worried about what they get back," he says. But then again a low budget picture can be made for as little as £30,000 and, given the interest the site has generated so far, he does want to seek further funding from the type of small private investor who got films like Leon the Pig Farmer and Staggered onto the big screen (email Greg at admin@makingmovies.com).

Film finance is based on the principle that talent attracts publicity, publicity attracts money, money attracts more money and eventually there's enough talent, money and publicity to make a film. The more interest, the more it might happen. Tallent cites a bloke in Durham who has just invested in the new Liz Hurley vehicle and wants to get involved with Making Movies. Another guy in the States has his own production company and can offer a partnership in LA. Put the two together and you have

the makings of a deal.

Tallent can see a time when all this wheeling and dealing will be done via video-conferencing and the resulting films will be downloaded straight to peoples' homes. In fact, in terms of the entertainment marketplace, he believes access to global capital, production and distribution can all be done via the Internet. He says, "We want to get there first...this is the way things are going." Not quite a Hollywood ending but definitely one to watch.

Tamsin Hughes



RUNNING JUSTIN TO GROUND

INTERNET PEOPLE

Justin's Links to the Underground (http://raptor.sccs.swarthmore.edu/jahall/) when you've been seeking out the weird, the wild and the wonderful on the World Wide Web. If you haven't, you've been doing it the hard way, as these pages have an amazing number of links to the darker side of cyberspace.

Like many second generation Internauts, Justin Hall was a BBS junkie, racking up a \$360 phone bill in his first month of relay chat to a Californian number. After that shock he stuck to his local pirate/hacker scene in Chicago, trading files, writing for a phreaker rag, *The Humble Review*, and

generally being paranoid.

He first tapped into the Internet illegally in 1988, through a friend's university dialup account, until he was caught through an email trace. Within a few months of hooking up his Swarthmore College dorm room for full access in late 1993 he published his first Links to the Underground.

Justin says, "After surfing the Web for a while, I realised that most of the online publishing efforts were amateur – people who knew how to use HTML but didn't necessarily have

anything to say."

It may be a voluntary effort but collating the world's most comprehensive collection of obtuse links takes time. Justin spends several hours each day opening email, editing and collating coprobilia.

Of the 31,000 hits his site receives per week, he says, "Most of the people who are moved to write seem to be cool, grooving on my wavelength, if you will. However, a big transition was getting mail from people who were upset with me or my work, and discovering that not only fans read my pages. Also, people call me on my words now, a certain responsibility of voice I have not had before, but I get so much help from my readers these days, they're a godsend. Links, fixes, encouragement, criticism – they are returning my efforts."

Justin is a strong advocate of freedom of speech. "People in power have to learn to have faith in the strength of their own message, without trying to squelch challenging materials. If you are right and cool, people will gravitate towards you.

"I don't worry about what kids will see on the Internet; it's no different from what they are exposed to walking down the street in a big city. If parents want to protect children from raunchy content, they can sign them up for a restrictive online service. It's that simple, since parents pay the bills.

"If the kid is resourceful enough to get around that, they deserve all the content they can find. Besides, adults (and a lot of kids) shouldn't be protected from things. Give them better options and let them decide for themselves."

Justin's Links to the Underground is soon to have its own dedicated server which promises to offer more variety, freedom and areas for other publishers.

As Justin says, "Today's Web publishers are determining the composition of tomorrow's information and entertainment netscape. Get online, check it out, add your voice. Help people who wouldn't otherwise have access to the new tools and put someone online who challenges the dominant paradigm."

Angus Kennedy

MP CANVASSES CONSTITUENTS' VIEWS OVER THE INTERNET

POLITICS

nne Campbell MP remembers her email address but not her post code. Of course it could be an affectation but then she does represent Cambridge, probably the UK's most hi-tech constituency, and she is one of the MPs who actually uses the Internet, rather than just talking about it.

"I receive around 10% of my constituency post by email now," she explains. Apparently constituents at Cambridge University, as well as those who work in the silicon fen computer industry, like it better than other forms of communication. "I prefer email at the weekends, too; it's somehow friendlier than the telephone because it doesn't interrupt what I am doing," she says.

Before becoming a Labour MP, Campbell was head of statistics and dataprocessing at the National Institute of Agricultural Botany in Cambridge. There she used internal email and Janet, the network that links Britain's universities. Only in September 1994 did she plug into the Internet. "I've spent more time than I should surfing around since then," she says apologetically.

Campbell's family also benefits from the ease of communication afforded by the Internet. "My husband recently spent a month working in Japan," she says, "and with time zones and busy work schedules, email is often the easiest and cheapest way to keep in touch."

A newsgroup has proved useful in constituency work. "I am fortunate that cam.misc covers my constituency. I am able to post information that I think will be useful but is too specialised for the local newspapers to cover and the great thing is that conversations start."

This could have a profound effect on our democracy, she believes. Although her home page is still in the early stages of development, one day all MPs could post parliamentary information and their voting records to the Internet. "I hope to be able to announce a vote tomorrow and canvass opinions from constituents. An MP won't always vote as they suggest, but it will be possible to broadcast information about the debate leading up to a vote, which will allow constituents to take a considered view."

Until then, however, Campbell is focusing her energies on increasing the number of people who have access to the Internet and she is involved in the Cambridge On-Line Project.

"Our first task, though, is to get the

information onto the Internet that ordinary people want to use, like the council house exchange list, bus and train timetables and benefits advice. Once people see that the Internet contains useful advice, they will think about how to access it from home."

Campbell recently opened CB1, Cambridge's new cybercafé (see page 14). It's already a hit, she says, "because accessing the Internet can be rather lonely but in a café you can share what you are doing with friends." If she's right, perhaps Wesminster should turn its tea room into a cybercafé.

Anne Campbell can be contacted at anne.campbell.mp@solo.pipex.com. Her home page is at http://www.worldserver.pipex.com/home/anne.campbell/

Tim Dawson



ON COURSE FOR TRAINING

EDUCATION

he Internet Training Company (ITC) was set up last year in association with access provider Demon to offer training and consultancy on all aspects of the Net. Its main objective is to advise and educate the business community but it also offers a range of courses for home or small business users.

Bridie Ashrowan, ITC's general manager, acknowledges how broad the topic of the Internet is but, she says, "We aim to demystify what it's about and make it usable."

So far, take-up has been good and the company has worked in several areas, including the agricultural, pharmaceutical and financial sectors. Some of its recent clients include Shell, the Stock Exchange and the DTI.

ITC is tied in with Demon but prospective trainees don't have to have a Demon account to attend a course. Although the company's client base was originally built up via Demon contacts, it is now being developed through promotional material on ITC's Web pages (including full course details and

syllabuses) and magazine advertising.

For large businesses ITC runs a half-day presentation called the Internet Introduction which aims to raise the level of Net awareness in an organisation. Most people then want to take advantage of some of the skills seminars on offer.

Given that the WWW is the world's fastest growing publishing environment, the Web skills workshop is particularly popular. This systematically deals with: the WWW; Mosaic and other browsers; downloading sound and video files; and recommended WWW sites.

ITC's philosophy is to communicate a complicated subject riddled with jargon and acronyms in a non-technical way – an approach that's all too often ignored by so-called Net experts.

The Internet Training Company, located at http://www.hyperlink.com/itc/index.htm, is part of Information Hyperlink Ltd (IHL), an Internet consultancy which also offers Web publishing and leases server sites.

Tamsin Hughes





Access moint

Internet access providers are the poor souls who set up and, crucially, maintain the link between end-users and the Internet. As Marc Nicholas explains, it's not a job for the faint at heart

Becoming an IAP (Internet Access Provider) is not a matter of cobbling together a few US Robotic Sportsters, a Power Mac server and getting BT to lay a dozen phone lines to your garden shed.

Some logistics must come first. You need to decide first of all what your product is. Do you sell only SLIP/PPP accounts? Or a menu-based system? Or dedicated connections? The vogue in the UK seems to be for SLIP/PPP access, but in the US there is a fairly healthy spread of SLIP/PPP, shell and GUI front-end services (so perhaps we can expect similar offerings in the near future).

Then the hardware needs to be chosen. Sun used to dominate the market but smaller IAPs are now using PCs running BSDi's BSD/OS, Hewlett-Packard PA Risc machines or even

Digital Alphas. These servers will be responsible for running the DNS (domain name system) and handling email routing, as well as other Net paraphernalia like IRC, Usenet, FTP nd WWW.

Next, a prospective IAP has to choose terminal servers, routers and modems. Terminal servers connect the dial-in modems to the rest of the IAP's local network. These workhorses operate in one of two ways: either they automatically Telnet to a pre-destined address and allow you to connect to a host where you can then log in, or they actually perform the SLIP/PPP connection themselves. This means that users only access a host on the IAP's network when they are exchanging email or reading news, thus relieving CPU load. The terminal server will

automatically route packets across the local network and back through the Internet router too.

Popular terminal servers include units from Cisco, 3Com, Xylogics, Livingston and Telebit. While most connect directly to an Ethernet lan, there are also SCSI-based terminal servers such as those used by Demon.

The industry standard brand of router (the device that connects the local network to the Internet feed) is Cisco. The company's 7000 series models are just about the only things capable of handling a direct, actively-routed Internet backbone feed. Active routing means that new networks (blocks of IP address) are automatically announced and updated. This normally happens via a protocol called BGP. There is also a move away from Class-based networks



(Class A,B or C) to CDIR, which is a classless system. Thankfully, all this is usually hidden from the end-user.

Modems are the bane of an IAP's life. Managing tens, or even hundreds, of them, and their connecting phone lines, can be a nightmare. And you can't rely on the little Robotics Sportster you use at home to do the job, although some try to use them!. Power supplies

A current newsfeed can total about 200Mb a day. When you consider that most providers like to store at least one week's worth of news, you realise how much file space Usenet needs

on cheaper modems tend to fry themselves and their relays simply aren't as reliable as those in commercial-quality modems. Of course, IAPs also have to contend with getting several hundred phone lines installed in the first place – as you can imagine this can be great fun and games.

Once in place, dial-in lines are normally set up in a cyclic hunt group so that after every dial the number advances to the next line. This helps avoid busy signals and also stops the hunt group from being disabled by a faulty line or ring-out.

The US is the motherland of the Internet and it therefore goes without saying that getting Internet access there is quicker, easier and cheaper. In the UK, the picture is slightly different. While we have our own sophisticated academic network in the form of Janet, we have no government-sponsored 'data highway'. Internet links in the UK either attach to a private network, which in turn connects to another major network in the US, or go direct to the US.

Demon and Pipex run direct links to US companies SprintLink and Alternet

respectively. The cost of these connections is considerable and both companies pay tens of thousands of pounds a year to lease their data circuits: leasing a 64k data pipe across the Atlantic can cost in the region of £60,000 per year. In the US, meanwhile, a 56k circuit and an Internet feed can be had for less than \$500 a month in some areas.

These steep costs inevitably mean that bandwidth at this end can suffer. In the US, it is not unusual for a provider to have at least a T1 (1.544Mb per second) connection to the Internet and some either have multiple T1s, 10Mb (Ethernet bandwidth) or even T3 (45Mb) links. But here many providers connect to backbones with tiny 64k pipes; until recently Demon only had a 2.56k link and even Pipex limits itself to 768k. (Demon has now added a T1 link direct to the US.)

Once connected, an IAP needs to sort out its domain name, IP address allocation, routing and other paraphernalia. Once DNS and routing are in place, other sites on the Internet can find the IAP's site either via an IP address (eg 192.67.67.20) or a domain name (eg marc.com). The DNS is a distributed system, so a machine running DNS knows only the addresses of 'root' servers. These root servers then provide the IP address of either the root server for a country suffix, or the full IP address of a machine having authority for that domain.

For example, if I'm looking for the host computing.emap.co.uk, I query the root server and it gives me the IP address of the server that handles .uk. In turn, I query that machine for .co.uk and it gives me the address of the appropriate server. I then turn to it for .emap.co.uk and it will give me the address which has authority over that whole domain. Finally, I query that machine with computing. emap.co.uk and it will

give me the IP address I was originally looking for. The whole process sounds rather complicated, but it does mean that the load for DNS lookups is nicely spread.

DNS not only handles the actual resolution of domain names into IP addresses (and vice versa) but, clever thing, also deals with things like email routing. For example one or more machines on a site will be designated with MX records. These show a machine that will accept all incoming email for a site and then distribute it.

After email, Usenet is probably the next most important item on most Internet users' agenda. However it is a heavy burden for IAPs to take on.

A current newsfeed can total about 200Mb a day of data. When you consider that most providers would like to store at least one week's worth of news, you realise how much space Usenet needs. Equally onerous is the duty IAPs have to provide technical and support services to their customers, and they need to employ people to administer their systems as well...

As you can see, there's more to

being an IAP than meets the eye.

So, next time you can't log on to your local provider, spare a thought for the hard work it puts in.



It's not just about technical issues. **Richard Vadon** warns potential access providers to consider the legal and ethical implications, too

Whose line is

it anyway?

uch of the publicity surrounding the Internet has concentrated on how it can be used to trade in pornography, obtain information about drugs or distribute offensive literature. There's no point denying there is a seamier side; it exists because so far the ethos has been 'anything goes'. However, as the Internet grows, this attitude may have to change to reflect the concerns of mainstream society. Some form of regulation or censorship will be needed. This could be by governments or by the access providers themselves. The nature of the Net could even mean that only self-regulation by Internet users is possible.

The UK Government has already introduced legislation pertaining to the Internet in the 1994 Criminal Justice Act. Pornography laws have been extended to include computer-generated pornography and the definition of 'publication' in the Obscene Publications Act has been extended to include computer transmission.

But whatever the Government does, it is the police who will do the enforcing. One of the few policeman patrolling the Internet is Detective Inspector David Davies of the West Midlands Commercial Vice Section. His views on regulation are tempered by an understanding of the Internet's nature.

"There are many things on the Internet that some people could object to, such as adult pornography, but they are not in themselves illegal," he says. "We are only concerned with what is illegal - child pornography. We monitor certain child pornography-related Usenet newsgroups [Internet discussion groups] and are about to go ahead with the first British prosecution."

Detective Inspector Davies does not believe that such police actions are going against the culture of the Internet.

"People in the industry and on the Internet are on our side. They don't want the Internet abused and will often contact us to bring abuses of the Internet to our attention.'

Access providers are in a particularly difficult situation, because they are the ones distributing to the Internet, and it is their computers which may be storing illegal material. BT has decided to censor its Internet service. It will not carry any of the newsgroups that it believes contain pornographic information and will check for 'dubious' files in other sections of the Internet. Adrian Edwards, the commercial manager of BT's Internet service explains, "We don't want to be moral judges or Big Brother - it goes against the grain - but we will not be offering a top shelf service and will try and ensure that pornographic materials are not stored on our computers."

One of the UK's largest access providers, Pipex, takes a different line to BT. David Murray, Pipex's marketing consultant, believes it is not the company's place to censor the Internet. "Positive vetting, as BT has proposed, is practically impossible without turning into Big Brother," he says.

Douglas Rushkoff, the San

Francisco-based author of such books as Cyberia - Life in the Trenches of Hyperspace, does not believe that any censorship is needed. "The Internet evolves and self-regulates naturally, reflecting the belief systems of the people involved. As people with more commercial expectations get online, the character of the services will change."

This view is supported by recent evidence of people controlling the use of the Internet by rebuttal, email bombs (thousands of dummy email messages), cancelling and computer viruses.

Rebuttal has been used to respond to the posting of offensive material. Several right wing groups have used the Internet to disseminate holocaust denial information. Individuals have responded by posting counter material to flood out the racist material. A Canadian, Ken McVay, was one of the first anti-Nazis operating on the Internet. He has spent two years responding to anti-Semitic

postings in Usenet newsgroups.

He initially thought that censorship was the answer but has now changed his mind. "They are liars," he says. "Why shut them up when it is so easy to shoot them down? The most intellectual among them are stupid and completely inept when it comes to historical research. Why ban them and force them underground? I want to know who I'm dealing with. I want to know where they are and how their minds work."

Email bombs have been used to punish perceived misuses of the Internet. The most famous example was the case of lawyers Cantor & Siegel. They broke one of the rules of the Internet community and advertised on thousands of Usenet newsgroups. This misdemeanour was punished by email bombs which led to Cantor & Siegel being dropped by their access provider.

Another recent Usenet advertiser, author Michael Woolf, was punished by having all his messages cancelled. This was done using a program called Cancelbot by a user known as Cancelmoose. Cancelmoose described its actions as "pure, unilateral, vigilantism", in a message on a public bulletin board.

Computer viruses are by far the most severe method of control used. Viruses have been placed in pornography Usenet groups as traps for pornography users, so that those attempting to download pornography will, by their actions, infect their computers with a virus.

Self-regulation of the Internet may be the only practical solution, but it brings with it as many problems as it solves.

As Rushkoff says, "Government or corporate regulation of the Internet is impossible in any true sense. Groups of individuals with email bombs, viruses, etc stand a better chance, but only when they reflect the anarchic qualities of the Net.

The anarchic qualities of the Internet have so far been interpreted as allowing anyone to say anything. However, it is worth bearing in mind that if you are responsible for bringing users' opinions to the Internet, you might also be the one taken to task about the content.



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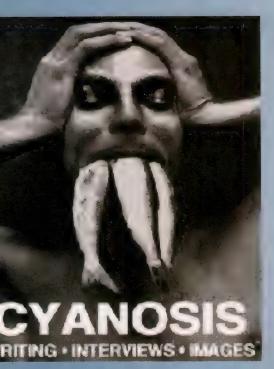
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The WWW seems to

be a safe haven for those

with literary pretentions.

Jim Hayes seeks out the

worst perpetrators of

crimes against the

English language

Pundits have long predicted the rise of the online magazine and the demise of its paper counterpart. The Internet is a much-vaunted enabler of the electronic publishing revolution and most magazine publishers are dabbling in it. Publishing via the Net holds big attractions: it minimises escalating paper, printing and distribution costs and can slash staff overheads.

Internet versions of existing titles are currently appearing on a speculative basis, but far and away the major publishing influence on the Net is that otherwise niche player – the zine.

Zines – anarchic, homespun, special interest – cover anything and everything from free-range fromage frais to frottage. Most interesting are the zines which attempt to create something solely for the Net. Borrowing from the quality threshold set by conventional magazines, they exploit the ability to explode onscreen information with hypertext.

Some steer an unsteady course between the esoteria of zinedom and sheer monomania (it's clear that a hundred years ago, the creators of these 'egozines' would have been busy peddling pamphlets) and the snippets of inadvertent humour we have uncovered here are but crumbs in a rich and seemingly limitless seam. Others are consciously exploiting the fact that cyberspace offers editorial opportunities far removed from the uni-dimensional (and perceived legal) constraints of the printed page.

SOMETHING NEW?

It's New! at http://www.cts.com/~itsnew/premier.html is billed as bringing you 'everything new under the sun'. An interactive mag that informs you about innovations, ideas and trends, it aims to keep the inventing community in touch with the latest lab fodder, but also serves as a showcase of new widgets for prospective commercial backers.

It's New! is an earnest endeavour. A sneak preview of future issues promises

some mind-bending innovations:
recycled furniture; a hi-tech toilet; a
composter that operates on worm power
(the mind boggles – teams of wriggling
worms on generating treadmills?); a
foldable tandem bicycle; a species of
jungle roses 'as big as your fists';
windshield wipers 'guaranteed for life';
and flying Aboriginal art.

'Like what you see? Any suggestions?' entreats the home page sign-off. Well, the INTERNET boffins put their heads together and have submitted several ideas to It's New! So, in future issues look out for our reusable cotton buds, cold fusion chip fryer, solar-powered letter opener, non-stick commode and a briefcase that fits into your existing briefcase.

IMPECUNIOUS IMPERATIVE

Webster's Weekly (http://www.da. awa.com:80/w2/) was launched back in June 1994, the brainchild of original managing editor, one Brian Knatz. "'How', I asked myself schemingly, 'can I get all my humanist friends into cyberspace?'" he ponders in his opening editorial. However, it is Bazzer's replacement, David Miller whose editorials set the guiding tone.

"It is a truism among literary critics (especially deconstructionists)," he opines in the preface to issue five, "that all writing is ultimately self-reflexive. According to these critics, texts invariably narrate not only the story they've been created to tell, but also the conditions of their own production."





In contrast to the more esoteric publications available online, heavyweight publishers such as Time Warner have set up sites promoting their 'real world' magazines



The boards are growing ... Post

your opinions

Feedback and Election 94

on two new

The Time Warner site can be found at http://www.pathfinder.com

However, this conviction proved shortlived; at the start of issue six he confides, "This week I had an epiphany about my own sense of aesthetics."

David Miller's idiosyncratic observations are entertaining enough, and could stand as the basis of a cyberrewrite of *The Diary of a Nobody*, but for a real soul in torment check out Jess Weiss, author of an occasional *Webster's Weekly* column, *Suspicious Ramblings*. Jess Weiss brings new depth to the phrase 'inwardly focused'. The following quotation provides a flavour:

'I was born in 1972...It was also a key year in what I call the Great Disillusionment, a term I will explain in later columns if someone reminds me. 1972 marked the split between the Age of Aquarius and the Age of Analysis. Jimi Hendrix became the Bee Gees and I entered the world at a weight my mother has referred to for 21 years simply as 'horribly large'...I guess the central theme of this generational polemic is that labels are just organising simplifiers. It may well be that knowing the name of something is equivalent to having power over it, but assigning a name does not result in that same power. If you call a rock a dog it still won't lick you." INTERNET keenly anticipates Jess' future cogitations.

NO QUICK FIX

The Bomb Squad, 'belligerent purveyors of tack and perversity', takes credit for *The Fix* at http://www.easynet.co. uk/fix/info.htm. Home page options include regular sections (sex, travel, music/screen reviews, clinics, fashion, listings and soap) and Fixnips, (news, cyberagitprop, sport). The tone is analogous to twentysomething lifestyle rags such as *I-D*.

The February issue includes a studiously pedantic guide to tantric sex, complete with detailed instructions which, if followed to the letter, would have sporting partners dozing off while you struggled to avoid orgasm "for as long as possible". But don't take my word for it.

The Fix exploits many of the titillative hooks newstand magazines use to retain reader interest. However, it skirts close to certain zine-like trappings, including a rather under-inspired

apologia for sexual perversity – "Christ was the perfect pervert. He's quoted in the Gospel of Thomas: 'When you make two human beings into one, and when you make the inside as the outside, and the outside as the inside, and the top as the bottom, and if you make the male and the female into one so that the male is no longer male and the female no longer female, then you will enter into the Kingdom.'"

Vol. 145 No.9

THIS WEEK'S TIME

Such tacky theology is a strong contender for INTERNET's cyberfatwa, which we will be imposing on any particularly crass examples of Net junk or pretentiousness which cross our virtual path. This aside, *The Fix* is a commendable example of the synthesis achievable between traditional mags and their cyberspatial counterparts.

WORTH A FLICK-THROUGH...

The Lynx at http://www.gold.net/ lynx/, which is published by CityScape and Global On-Line, is an attempt to see if a 'real' magazine can be published on the World Wide Web on a regular basis. "The magazine will cover the more alternative sides of the Web and the Internet, and we hope to be amusing, informative, and slightly anarchic...' blurb promises. The last objective may be wishful thinking for, alas, The Lynx lists a bit towards the sententious. However, issue three contains a useful article about copyright in cyberspace which we had intended to quote at length, until someone found out and slapped an injunction on us for attempted plagiarism.

Cyanosis – go to http://www.slip. net/syszero/cyanosis/cyanosis. html – forms part of System Zero, 'a gathering place for the collaborative exploration of creative experiment – especially those of exotic or controversial nature'. This is an eclectic and elective assembly of contributions. Somewhat lacking in focus, its veers towards the scrapbooky. However, it's well worth a visit on a cold rainy afternoon.

Fortean Times at http://forteana. mic.dundee.ac.uk/ft is a bi-monthly magazine of news, reviews and research on unexplained phenomena. The newstand version was launched in 1973 to continue the work of philosopher Charles Fort, who was sceptical about scientific explanations, observing how scientists argued for and against various theories and phenomena according to their own beliefs.

Here you can find out more about Fortean Times. The Net version does not give much away for free, but includes a taster per issue to encourage Netsurfers to subscribe. It has to be said, the contents listing is nigh irresistible: 1994's most bizarre suicide; hand-relief miracle; and the Illinois enema bandit.

At http://mosaic.echonyc.com/~xixax/Inquisitor/ you'll find Inquisitor, the self-styled 'logical end result of the soupification of various media, art, culture, and technology... Inquisitor strives to look beyond the hype and trendiness of current cyberculture. No hype, no glitz, no po-mo [sic] references, no unnecessary interface. Content dense, informative, yet with tongue planted firmly in cheek.'

This magazine is on a crusade to de-hype reactionary issues and, although it affects a consensual stance, your subtext-detectors might start twitching the more you read. Of course, the overriding subtext is to get you to subscribe. Beyond that there appears to be no subject capable of daunting *Inquisitor* writer-in-residence Dany Drennan. Party on!

Jim Hayes (jimh@computing.emap.co.uk) is editor of Datacom.

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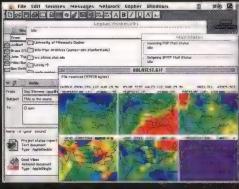
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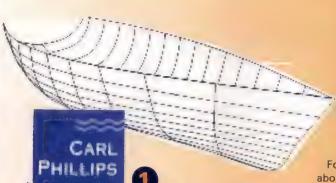
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Pick of the month

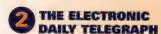
INTERNET sales manager Matt Townend highlights the sites that sell themselves to him

For me, the Web is like any other medium – I'm not interested in magazines about train-spotting, so I don't want to look at train-spotter pages, even well-designed ones. However, given what I do for a living, I am interested in home-grown commercial sites.



ON-LINE YACHTING BROKERAGE

http://beta.aladdin.co.uk/cpy/
Heave to here for the yacht of your
dreams – a modest Hunter 26 Bilge keel
Cruiser maybe, an X-342 Cruiser Racer
perhaps, or maybe an Alchemy G
(\$795,000 and you'll have to go to Fort
Lauderdale to get it) – all accompanied by
photographs and detailed technical specs.
The layout is simple and useable and
demonstrates how a UK company can
effectively access a global market
through the Internet.



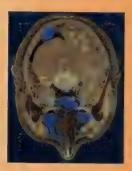
http://www.telegraph.co.uk
Until recently the Internet was seen as the exclusive domain of computer experts.
However, when an establishment publication like *The Telegraph* starts to use the medium, it demonstrates how far the technology has moved on. After initial teething problems this site has developed into a well designed, easy-to-use source of news and information, and an example to other newspaper publishers.



THE VISIBLE HUMAN PROJECT

http://www.nlm.nih.gov/extramural_research.dir/visible human.html

This site appeals to me because I am personally fascinated by the macabre but also because of the quality of the work.



For those who've not heard about it, the pages carry pictures of some poor fellow from the USA who has been frozen, cut up into 1mm slices and then photographed slice by slice. A great after-dinner talking point.

PRICE JAMIESON GROUP RECRUITMENT

http://www.gold.net/pricejam/
To misquote Remington's Victor Kiam,
"I liked the idea so much I placed a job
advertisement on the site." This is an
obvious Web application – to highlight
jobs in different employment areas such
as media, computing, and so on. At the
moment it specialises in just a few
specific sectors but I imagine this
will expand rapidly as the Internet's
user base grows.

BARCLAYCARD NETLINK http://www.barclaycard.co.uk

I have picked this site for the same reason I nominated The Electronic Telegraph. Again it's a major company recognising that the Internet is here to stay. The site aims to help build relationships between clients and the bank, although it's currently limited to information about Barclaycard services. However, there is also an email facility for customers to pass comment.

MACINTOSH FTP SERVER

src.doc.ic.ac.uk/computing/ systems/mac

This is beyond doubt the primary contender for any Mac-owner's FTP shortcut file. All the indispensable shareware is here, including animated beachballs to bounce around your menu bar, eyes to track your pointer, fonts in the shape of animal faeces – you know the kind of stuff. Umich, Info-Mac and Sumex are represented in mirror form and this site can offer you hours of computer fun.

7 ELECTRONIC NEWSTAND

http://enews.com
From American Immigration Law and
Green Card Lottery News to the Yoga
Journal, you're bound to find a magazine
here to take your fancy. This site is
probably the most comprehensive
magazine browser on the Net and has
developed into a truly international
bookstand of titles. When you've found
the magazine you've been hunting for,
you can then read a sample of editorial
and subscribe there and then.

UK INTERNET FLORIST

http://mkn.co.uk
A handy site to keep in your hotlist if you work as late as we do at INTERNET and usually have some apologising to do.
Choose your arrangement and message, fill in your credit card number and, if s/he likes flowers, forgiveness will be yours.

DEC DIRECT INTERACTIVE

http://www.service.digital. com/ddi/html/ddhome.html
A site which is already reaping benefits for its parent company and customers, Digital's server gives you a great deal of technical information and pricing on some 8,000 software and hardware products. The design is what you'd expect from a company which uses sharp marketing techniques. My only criticism is that it's aimed at an American audience, though a UK server is planned.

http://akebone. stanford.edu/yahoo/ I use this site to show off the WWW, by demonstrating the range of information about any given topic that's out there. It's a straightforward but immensely

powerful search tool and I use it daily.

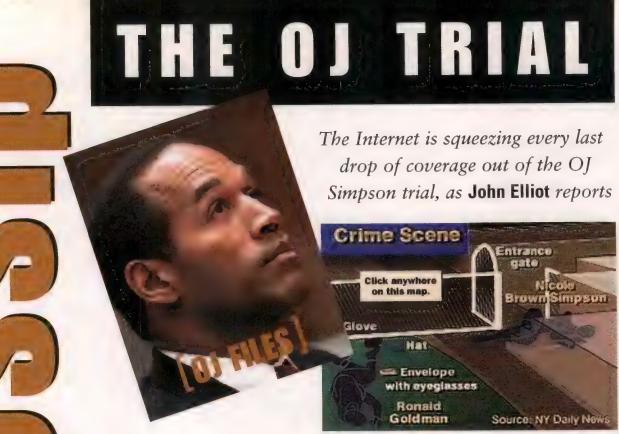


Services,

DECdirect Journal
The Sth Wave
Contours by Rich Tennant
Not Red Renaus
Software Demos

27129163

DECdirect FAG



This clickable scene-of-crime map is located at pathfinder.com

ou'd have to be a
Buddhist monk in retreat
on the slopes of the
Himalayas not to have at least
heard of Orenthal James
Simpson. To jog your memory,
the ex-football star and
sometime actor is currently
standing trial for the
murder of his ex-wife,
Nicole Brown

Simpson, and her friend Ronald Goldman. In the States you can see the trial broadcast live on two channels simultaneously and every network has frequent 'Ol updates'. Even here in the UK, BBC2 broadcasts a half hour summary of proceedings once a week and readers with satellite dishes or cable TV can tune into this coverage on Sky News, NBC and CNN. Want to know even more? Then all you have to do is point your Web browser at http:// pathfinder.com/pathfinder /features/oj/central1.html.

This is Time Warner's Web server and the so-called OJ-Files comprise all the information you could ever want about the trial and its background. Starting off at the OJ Central Page you're presented with a clickable image that comes straight out of the CD-Rom/CDI school of design. Text-only links are also supplied.

From here you can find out about the crime itself and read comments and essays published in Time Warner titles, including *Time*

magazine. One of the most intriguing links brings up a review and excerpts from OJ's best-selling book, *I Want To Tell You*. A talking book also allows you to download short spoken excerpts as UL, AW, AIFF and .WAV files.

Onto the trial and perhaps the finest clickable graphic ever encoded in HTML: a view of the courtroom, with labels for the key players and links to biographies of all the key players.

As you'd expect there's a clickable map of the crime scene itself, complete with corpses and pointers to where all the evidence was found. Clickable calendars let you trace the whole chronology of the case, from the day the murders happened right up to today's courtroom revelations.

All the OJ coverage in Time Warner's printed titles is available, including articles from *Sports Illustrated* (with a review of OJ's 68-minute fitness video), *People Weekly* and material from Court TV's Law Center, which lists the documents filed in the case.

The site also provides a bulletin board in HTML where you can leave your own comments. Although the concept is good, comments fall mainly into either the 'guilty and fry him' or 'innocent and persecuted' categories.

Perhaps the most intriguing pages are the court transcripts, which make addictive (and expensive if you have a dialup link) reading. Compiled by Time Warner subsidiary Esquire Communications, they give a second-by-second account of every word spoken and every significant movement that has taken place under Judge Ito's watchful gaze. It is compelling stuff and as an example of what the media giants can produce when they pool their titles' resources, it really does show the way of the future.

However, Pathfinder is not the exclusive repository of OJ information on the Web. All the possible anagrams of his name can be found at http:// www.teleport.com/~bwalter/ oj.html; the definitive list of OJ jokes (mostly tasteless) is at http://hengest.cs.odu. edu:80/~cashman/oj.html and the Official Unofficial Simpson Web Page, a collection of graphics-based jokes (again largely tasteless) is at http://www.best.com/ ~rdc/roger/oj.html.

The Tacoma News Tribune and the San Francisco
Examiner have all their OJ articles available at http://www.tribnet.com/index/oj.htm and http://sfgate.com/examiner/ojindex.html respectively. And if you get really hooked you can always share your obsession in the newsgroup alt.fan.oj-simpson.

John Elliot is a writer and comms expert. He can be reached at john@harry.demon.co.uk



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exceptional price, including excellent data compression and full IP and IPX spoofing support. Atto does more and costs less than the competition. And that's a



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ENROPE'S INTERNETWORKING COMPANY

Dial Solvent Special S

Throw out your slowcoach modem, says Robert Barrett, ISDN – BT's digital technology – will put you in the fast lane

ialup access to the Internet is growing rapidly and although modems speeds are increasing all the time – 28.8k will soon be standard – applications like Web browsing still crawl over analogue lines. BT's ISDN (Integrated Services Digital Network) technology offers 64k or 128k if both 'B' channels are used, so the Internet and Web browsing could be the applications that stimulate the ISDN market to rapid growth.

An ISDN call is billed at the same rate as an equivalent analogue call so why don't home users switch from modem access to ISDN? Well, there are three main reasons. Number one is that service providers are only just getting into ISDN. Number two is the need for initial investment in installation costs and equipment. Number three is a technology issue – there is more than one way to implement ISDN access.

MODEM REPLACEMENT

The simple way to view ISDN is as a modem replacement technology. An ISDN TA (terminal adapter) is used in place of the modem. A basic rate ISDN connection – the sort most people would have at home – provides the equivalent of two lines and you pay the equivalent of two analogue line rentals as the rental for basic rate access from BT.

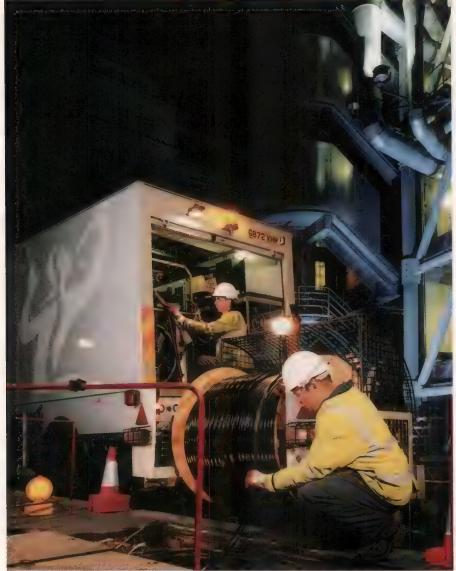
The more up-market TAs have an analogue port on them as well as the data port, so that an existing telephone or fax machine can be connected to the ISDN service. The data port offers a facility called rate adaption which allows the TA to be used as a modem replacement. Modem access to the

Internet is usually run asynchronously into a PC or Mac serial port. ISDN is a synchronous medium. The rate adaption converts the asynchronous stream from the PC, at a speed between 19.2k and 56k, to a synchronous stream at 64k for transmission over the ISDN. At the access provider's POP there must be the



Videoconferencing is one ISDN application - business trips abroad may become a thing of the past





That's what those men digging up the road are doing - they're laying ISDN cables

ISDN equivalent of a modem pool to accept the in-bound ISDN calls. Unfortunately, in the world of ISDN TAs, the standards are not quite as well established as in the modem world, so interoperability of TAs is reduced to the lowest common denominator – usually 19.2k – which rather defeats the object of using ISDN.

SOHO ROUTING

'Real' users connect to the Internet using routers and leased lines. In 1993 a new type of router emerged, the boundary router, designed for small sites connected via a single leased line. A natural progression from this is a boundary router that supports ISDN access as well as, or instead of, leased line access. Technology and market forces being what they are, prices for such routers, and in some cases the functionality, have been reduced to the point where you can now buy an ISDN router for little more than the cost of a TA.

Card-based routers for PCs and Macs are hitting the market for home office and small office (SoHo) lan applications. Very few ISDN routers or PC card products currently have the option to support an analogue port, but this will come within the next few

months from at least one vendor. The benefit of using a router is that you get the full 64k synchronous access speed. In many cases data compression can take the effective line speed of a 19.2k line up to 25.6k.

So what are the disadvantages? Once again, not all ISDN routers are the same. This leaves access providers with a problem. The data compression techniques tend to be proprietary, so interoperability is an issue, but an ANSI committee is currently producing a standard for data compression to overcome this problem. The service providers need to support a central site ISDN router pool, and for technical and pricing reasons they would probably prefer primary rate ISDN access, supporting 30 channels, rather than multiple basic rate connections.

While there are basic rate ISDN router vendors, primary rate unit suppliers can be counted on two hands. With PPP and IP, basic rate and primary rate routers will interoperate; the 'B' channels are directly equivalent so data is delivered with no problems.

However, there is another technical issue that is only relevant to dialup links and that is protocol spoofing. This is a way of fooling routers into keeping a logical connection 'open' while dropping the dialup call to save call charges during idle periods, for example when a user is reading a screen of browser text.

When the user takes an action that requires a remote access the physical link is re-established and the logical link carries on as if the call had never been dropped. Spoofing works because of the fast connect times offered by ISDN.

Unfortunately there is not an industry standard for spoofing, although moves are afoot to create an extension to PPP to overcome this. Most ISDN router vendors implement a proprietary spoofing algorithm. Therefore the access providers are left with the problem of either offering a service without spoofing or locking themselves into one vendor's ISDN equipment, and with so few primary rate products out there it would probably have to be one of the larger vendors, and their access routers (the ones needed for the home site) tend to be more expensive.

Once again the lowest common denominator is the choice of initial service offerings – PC card or low-end basic rate ISDN routers at the Soho sites

Why buy an ISDN bridge when you can buy the

agellys ISDN router

for just £249

There is a common misconception that all routers are more expensive than bridges - the OST Magellys Router proves the exception.

Why buy a router instead of a bridge?

The main benefits of Routing:

- (1) When you bridge two or more networks together it requires that all LAN's share the same LAN address which often leads to management headaches. With routing, each LAN maintains its own individual address and therefore identity.
- (2) A bridge on a busy LAN makes inefficient use of WAN bandwidth resulting in early congestion, leading to low data rates and therefore poor performance.

The MAGELLYS MultiProtocol Router from OST features:

Low price £2495 includes

1 Ethernet connection

1 Leased line connection

ISDN B Channel aggregation

RIP (triggered RIP support)

1 ISDN connection

(2 B channels)

TCP/IP & Novell IPX Multiprotocol Routing

- up to 10 channels

IPX. SPX and Netbios

Application Sensitive

Bandwidth On Demand

spoofing

Data compression

- Token ring (4 and 16 Mbps)
- Ethernet 'combo' (one card for 10BT, 2, 5)
- LAN to LAN local routing
- SNMP management including remote configuration
- Leased line support as standard including ISDN backup
- Internationally approved
- Transatlantic support with automatic 56K/64K adaption



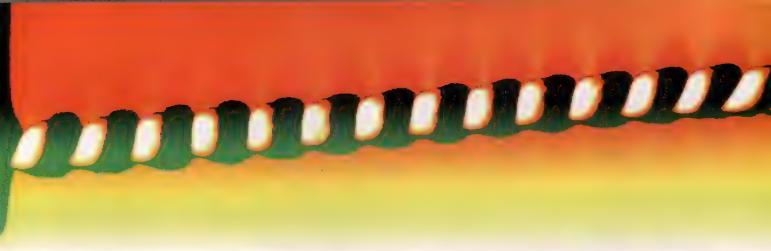
Less haste more speed

For more information contact: Andy Jolliffe, OST (UK) Limited, Cranbourne House Bath Road, Slough, Berkshire SLI 3UX Tel: 0753 533331 Fax: 0753 574475









with a high-end primary rate router at the central site, the access being over the common 'B' channels but without spoofing or data compression.

ISDN AND THE WEB

With Internet subcriptions increasing at the rate of 10% per month, and traffic associated with usage of the World Wide Web growing even faster, bandwidth on the backbone will become a big issue. Could Web browsing be the killer application that ATM (aka broadband ISDN) has been waiting for? And with increased demand for Web access by dialup users, ISDN will surely become a necessity.

At first glance ISDN would seem to be an ideal way of implementing a lowcost Web server. However, once all the commercial implications have been taken into account, the risks appear to

out-weight the benefits.

The majority of accesses to a server will be via the supporting POP. Very few people are going to make a long-distance ISDN call to access a specific Web server when the accepted method of surfing is to call via their own POP or, if they are lucky enough to be on a leased line connection, to go via their default home page, using the Internet to reach the server. So every time a surfer wants to access your Web server an ISDN call will be required from the POP to your site and you will get the bill for the call. After about three hours' usage per day, the ISDN bill will exceed the cost of a leased line connection, even on a local call basis, and leased lines within a local area are coming down in price.

Another lateral alternative to having a leased line to support your Web server is not to have your server on your site at all. Most access providers will allow a client's Web server to be located at the POP and connected either via a synchronous PPP link to a router port (to restrict access to 64k or whatever), or directly connected to its lan.

In return the service provider will want an annual fee. This could be less than a leased line cost and, as with a leased line, at a fixed known price, unlike the ISDN alternative where the total cost is a function of other people's access requirements. Access performance to your Web server can be much better when it is at the POP, especially if it is via a 2Mb leased line shared with other Web servers and Internet applications.



Response times and data transfer times will certainly be faster.

However, your provider may get upset if access to your server starts to hog bandwidth on its backbone connection and it may want to talk about a higher contribution. This is a good reason for opting for the synchronous link (at known, low speed), rather than a direct lan connection.

Having decided that ISDN is not the way to attach your Web server to the POP, it is nonetheless true to say that a dialup ISDN connection is an ideal way to support your remotely located Web server. You can log in to it, upload pages and generally maintain it almost as if it were on your site. Commercial Web servers that aren't updated regularly soon lose their appeal.

Despite the fact that the Web should be about easy access, HTML authors tend to want to make their pages as elegant as possible. Commercial applications, such as product catalogues, need pictures to make them appealing and Gif files are relatively large. One school of thought is that designers should keep pages simple so they are accessible by 'bandwidth challenged' users, but that's not human nature.

It won't be long before video becomes a link option on Web pages and then bandwidth in the backbone will have to be in multiple gigabits with megabits to the home. Primary rate ISDN can provide 1.92Mbits today – only the cost of bandwidth is holding back the applications.

With increased competition from cable companies and American carriers with access to the UK telecomms market, the cost of bandwidth to the home is set to fall dramatically over the next two to three years. I can feel a personal investment in a more powerful multimedia desk top machine and ISDN in the wind – my 486 PC and V.34 modem can no longer cut it.

Robert Barrett is a communications consultant. His address is barrett@market.demon.co.uk

instead or living patient

> EDITED BY CHRISTINE

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Everything you need to know to start doing business on the Internet now - in just one day

The Daily Telegraph Internet Conference

Find out how your business can use the Internet

to boost sales and cut costs

May 4, 1995, London

THE way you do your job is about to

Now, you can use your computer to communichange. For good. cate to over 30 million people - or target a

select few - via the Internet. The commercial implications are, quite

Did you realise, for instance, that you can use simply, astonishing. the Internet to build market share... increase brand awareness... enhance customer service... conduct market research... penetrate new markets... communicate with colleagues and suppliers worldwide... and access perti-

Companies such as Ford, Barclaycard, Club nent information? Med, Hyatt Hotels - and The Daily Telegraph itself - are amongst those who are already extending their business use of the Internet. And the list is growing longer every day.

But the Internet is not just for the multinationals. The plain fact is that every company in the UK can profit from the Internet whereas those who fail to do so are putting themselves at a competitive disadvantage.

Cut through the hype and jargon. Discover in plain English - how the Internet can work

We've made it our business to demystify the Internet. Over the course of a single fact-filled

you to successfully navigate the Internet

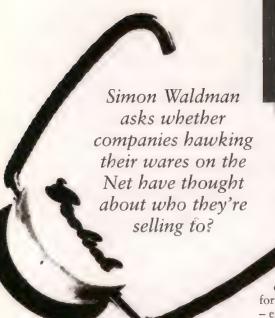
Key topics to be covered include:

- How much money can the Internet save your company and how much extra business can you generate?
- What are the options for getting connected - and how do you pick the one that's right
- What are the golden rules of communicating corporate information across the Internet?
- How do you pinpoint Internet opportunities that are right for your business - and make
- How can you guarantee a good response from your Internet advertisements?
- •How can you take and make payments safely on the Internet?
- Security and copyright protection.

Your questions answered by expert speakers who are already successfully exploiting the

At this Conference, you'll receive all the down-to-earth advice you need to get up and running, and doing business on the Internet. You'll hear case studies - many presented for the first time - which spell out, step-by-step, everything you need to know about getting down to business with the Internet.

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di	For full Conference Program For full Conference Program FAX: (0181) 288 0222 PHONE: 0800 908 959 (24 hours) FAX: (0181) 288 0222 PHONE: 0800 908 959 (24 hours) FAX: (0181) 288 0222 PHONE: 0800 908 959 (24 hours)
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here there is space there will be advertising and so it is with the Internet. A year ago, everyone became aware of the spamming antics of US lawyers Canter & Seigel and advertising on the Net was deemed a 'bad thing', but now their techniques seem most unrefined. Courtesy of the World Wide Web, Internet advertising has become more sophisticated and more acceptable.

The Net offers a wealth of advertising opportunities. Companies can put up text, pictures, sound and movies and they can interact with their customers in a way that hasn't been

possible before.

Unfortunately, when the big advertisers come online, they seem unable to resist bombarding us with every cybergimmick going. As a result, many commercial sites appear impressive until you try to use them. They may be brimming with gadgets and great concepts, but all too many do not pay enough attention to the basics.

For example, I decide I want to take a look at Reebok's Planetreebok site and I point Netscape in the direction of http://www.planet Reebok.com. I wait. The little thing at the top of the screen whirrs round a few more times before the message 'connection refused by host' appears.

Now I'm not going to give up, so I try again. This time, for some reason, I get in. I wait for the huge graphic to load - it takes just over a minute. I click on the section I want - Ask The Pros.

More whirring, another oversized graphic pops up - it takes 90 seconds to load. I want to ask the personal trainer a question, click, whirr etc and up comes a box for me to enter my query, asking for my name, email address and phone number (no way, Mr Reebok - definitely

not yet, after all we hardly know each other). I am invited to ask Ronnie from the Wellness Centre a question but I have to wait two weeks

for a response. Two weeks! What is this - email or the Pony Express? In two weeks I could fly out to the Wellness Centre, knock on Ronnie's door, read all the books in his fitness library, get a tan and come back home.

Somewhat miffed, I post my query (no, I shan't tell you, it's just between me and Ronnie). Up comes a screen asking me whether I would like to go back to the home page? Of course I



At http://www.intervid.co.uk/intervid/esp



...the Grolsch pages are smart and sassy but



.it's very irritating for the user when the information is out-of-date

would, so I click on the link and, lo and behold, 'connection refused by host' appears again.

Now, the Reebok pages are pretty and would look good in a presentation fed off a hard disk three feet away, but that isn't how their customers see them. We view them at home, with a dialup account, through a 14.4k modem.

We like graphics but they can come later. What advertisers need to realise is that us punters have more basic needs, such as can I find it with ease? Can I get into it without having to wait an eternity? And when I'm in there can I get what I want quickly and efficiently?

Invariably, the sites we go back to time and time again, commercial or not, are those that satisfy these criteria. Give us a few miserable experiences and they've lost us. Advertisers need to realise that we have long memories and short hotlists, and once a site has messed us around, there is no room for its address on our hard disks.

Let's look at these criteria. Without decent signposting and support, putting up a Web site is little better than sticking up a poster in your bedroom and hoping the world is going to stumble across it. So we need a bit of PR to get people interested - Web addresses on press ads and online pointers from a service provider's home page. We should also be able to guess the URL. If it is not the immediately obvious http://www. company.com then there are problems.

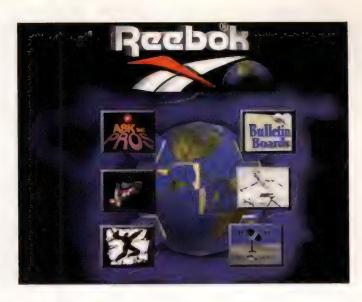
Now, let's assume we get through without trouble (a big assumption, I know) and as often as not, guess what, the first page - invariably the page of least use to us - is heaving with Gif files of elephantine proportions, taking an eternity to load. Even more sinful, these graphics are sometimes our only links to what lies beyond.

Putting text links alongside these graphics has now become more common but they are always tucked away at the bottom of the page and you don't usually spot them 'til it's too late.

With Volvo I decided to find out some details on the 850, the car in the ads which is so useful for crossing ravines and chasing planes dropping







boxes of cargo out of them. So I type in http://www.volvo.com, but before I get to the relevant page I have to load the home page, load the page on all 95 models, load a page on all aspects of the 850, before finally clicking to get to the data I want. Each time I get a page of graphics I'm not really interested in.

Sony's huge Web presence at http://www.sony.com is impressive but it's a monster to move around.

There's a ton of stuff and there really should be more shortcuts on the home page (only three at the moment). Another sin apertains to the movies and hardware sections, which weren't up when I first looked. Fair enough, but why not tell folks at the front.

It has taken a much smaller organisation than Sony to get it right here. Go Discs, which is at http://www.demon.co.uk/godiscs/, is

simple but effective. The graphics are small but can be expanded quickly with a click. Most of the links are text so you can be in and out, having grabbed yourself a sample from Paul Weller's new album and a pic of the great man himself in less than 10 minutes.

This is what we want - you may have to wait but at least you can skip past what you don't want. It calls for the intelligent use of text rather than graphics, however pretty. And yes, you may well say, you could switch the graphics off, but why should I? Isn't it up to the advertisers to make everything as easy as possible for us, rather than the other way round? If they insist on pages heaving with graphics, then there should be an option to choose between full graphics, small graphics or none at all. This is what happens on Bell Atlantic's site at http://www.bell-atl. com/ and it's a pleasure to browse.

Finally, is the site up-to-date? The Telegraph's pages at http://www.telegraph.co.uk have improved in all aspects, but it stops on Friday for the weekend. Unfortunately, the Net doesn't, so when a newbie friend logged in on a Sunday (he's a busy professional, exactly the sort of person they want to attract) he found news that was two or three days old. His logical conclusion was that the paper wasn't very up-to-date, so he wouldn't be checking in again.

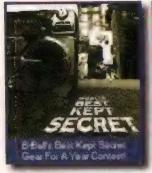
Likewise, the Grolsch pages at http://www.intervid.co.uk/intervid/esp/ are very clever and quite witty, but just as you're about to enter the competition to win a T-shirt, you find that the deadline was mid-January. In a medium that allows constant and immediate updating this is inexcusable.

So Mr and Ms Advertiser, before you offer us your Web pages, spend some time surfing at home with a 14.4k modem and get to appreciate the frustrations we face. When you can help us with these, then you will have our full support and, ultimately, our cash, which is what you really want after all.

Simon Waldman is a new media columnist for Media Week. For his guide to Net advertising, go to http://www.hhcl.com/wwoa.html

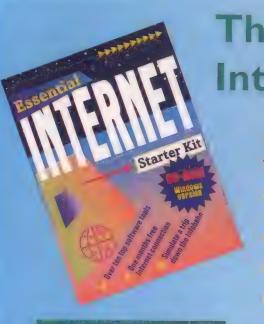












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Established models simply don't work in a different context. Ian Scales exchanges his old metaphors for new

any publishing companies have approached electronic publications as...well, electronic publications — computerised versions of a paper-based product with some of its advantages left out and almost all of its limitations left in.

In fact it's obvious that electronic publications are the result of reaching for the first metaphor that comes to hand—consequently a tried and trusted structure and set of conventions that work well for paper can turn into a serial killer on the screen.

Don't get me wrong. Metaphors are crucial because they provide reference points and without them electronic services are not going to fly, but the trick might be in picking an appropriate metaphor mix.

COMPUTING FOR WIMPS

As the PC industry discovered, a good metaphor is worth its weight in gold. The first PCs didn't bother with metaphors but Apple Computer sensibly decided that it couldn't expect all its potential customers to become computer literate before buying a machine, so the desktop, point and click metaphor was used on the Macintosh. Microsoft and others followed suit, and the rest, as they say, is history.

Ever since, the computer industry has been reaching for metaphors to help put some structure into new concepts. Not just to help the users, one suspects, but also to provide a much needed framework to constrain an argumentative development team.

LOSING ITS EDGE

However, metaphors in general can be a bit of a double-edged sword. The previous sentence involved what George Orwell (who was apt to brood over these things) famously characterised as a dead metaphor - a metaphor that has lost the power to conjure up its original meaning. You might deduce that 'double-edged sword' was coined because, in the heat of battle, it was just as likely to injure its owner as his enemy, but I've been using the phrase for years without ever having thought about its real meaning, and so, I'm willing to bet, have you.

Orwell classified three sorts of metaphor. A fresh metaphor is one which, when heard the first few times, makes a real impact (I hope to include at least one in this article). Those in the next category have been used slightly too often to remain fresh and, because they no longer summon up the original image, are apt to be misused and lead to sloppy writing and thinking. These he called stale – 'information superhighway' springs to mind.

After these come the technically dead metaphors which, because they have developed concrete meanings, are safe to use again. Our friend the 'double-edged sword', for instance, qualifies as 'dead' as it's developed a meaning and has no clear equivalent which doesn't turn into an ugly half-sentence.

The interesting thing about computer metaphors is that they have a useful half-life, rather like Orwell's verbal equivalents.

As a lifelong Mac user (the

The sort of metaphor which fits the bill is the business conference, rather than the publication, which is a one-dimensional affair

Mac's life, not mine), the desktop metaphor has long since lost its power to conjure up its original meaning. But Apple's approach has allowed, by design or accident, for a smooth mental upgrade, straight from 'fresh' to 'dead' without a stale stage in the middle. With some reluctance at first (because the Apple people really 'believed' in point and click) short cuts were added to oft-used operations and the core metaphor wasn't shoehorned into places it didn't really deserve to go.

As a result, the metaphors appear where new users really need them to help get their bearings. After that the dialogue boxes and operations can get as abstract and as usable as they need to be.

For instance, I don't think of the 'desktop' as a desktop – I think of it as the root directory. To me it's become a perfectly usable dead metaphor, having simply developed into another way of defining a computer function without limiting my understanding of what's going on.

The key thing about a good high tech metaphor, then, is that it should avoid being a tricycle and aim to be training wheels on a fully fledged racing bike (got that fresh one in at last).

Which leads us back to the electronic publication, and for that matter, the cyberspace shopping mall. In both these cases the metaphors are too specific and tend to constrain the application's ability to develop.

CONVENE A CONFERENCE

A good approach, therefore, might involve identifying a metaphor, or a mix of metaphors, which provide handy reference points for describing the system to start with, but which may then revert to being 'dead' metaphors as the user gains familiarity.

The sort of metaphor which fits this bill is the business conference, rather than the publication, which is, after all, a rather one-dimensional affair.

The big advantage of the business conference in an electronic format is that it is already a mixed metaphor in its own right. Being a delegate at a conference can involve a range of information-gathering activities which can be used as modular metaphors in our electronic equivalent – choosing sessions to attend, obtaining written papers to keep and refer to, interacting with key speakers and other attendees.

Like the desktop, and unlike the shopping mall, the conference metaphor can be applied with a light touch and many of its elements can migrate quickly to the 'dead' metaphor stage without causing any structural difficulties.

The conference metaphor doesn't cover all the Net's strengths, but best of all, from a commercial point of view, a conventional conference is a time-consuming, high ticket item. For the potential delegate, the thought of being able to participate in a 'virtual conference' without leaving the office, must add real value to the concept.

By contrast, an electronic publication, as a metaphor, only promises to provide what our professional is already receiving, often for free, on paper.

lan Scales is editor of Communications International. His email address is ians@ computing.emap.co.uk Everyone else is doing it, you don't want to be left Well, start here with the easy-to-follow INTERNET

What is the Internet?

The Internet is a global computer network made up of hundreds of smaller networks linked together by the international telephone system. These networks are run by governments, academic institutions and corporations. Individual users or smaller companies link in to this matrix of networks by connecting to the nearest node, again via a phone line.

Estimates of how many people are connected to the Internet vary wildly but the present figure is around 30 million. The Internet is growing at a rate of 10% a month and, if current predictions are to be believed, by the year 2010 everyone, certainly in developed countries, will have a connection.



What's in it for me?

Initially, most people want to be able to use the Net to send and receive messages by electronic mail – everyone on it has a unique email address and so, once connected, you can communicate with them all.

It also offers the opportunity to participate in discussion forums – called Usenet newsgroups – on thousands of topics (see the listings which start on page 104). Newsgroups are also a good way of gathering and disseminating news.

The most hyped part of the Net, though, and what draws most people online, is the World Wide Web (see the listings which start on page 63). This allows users to publish multimedia pages – containing text, graphics, sound and video – for other people to view. An incredible range of individuals, organisations and, increasingly, companies now put up pages.

connected?

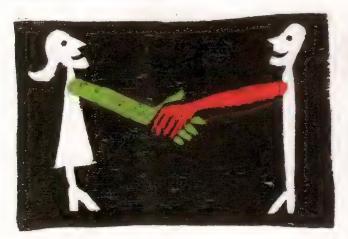
out, but where do you start? beginners' guide to going online



How do I become part of it?

If you know someone with an Internet connection, ask him or her to demo the Net, showing you what it looks like and what it can do. They will also be useful for technical support once you make the decision to connect. Alternatively, if you are lucky enough to live near a cybercafé, pop down there.

Having done that, you will need to get the right hardware and sign up with an access provider (see the listings on page 123), which will handle the local link from your computer into the rest of the Internet. The important thing to remember here is that you only pay for your section of the Internet. You will be charged for your connection, but this should only ever be a local call into the Net, whether you are sending email to High Wycombe, or video-conferencing with Hong Kong.



What sort of access do I want?

There are a number of different Internet services. Which one you choose depends on whether you just want email facilities, whether you want to be able to use newsgroups as well (ask for a UUCP connection), or whether you want full access, including the World Wide Web (you need an Internet protocol or IP connection for this). Full access starts at about £10 a month, but you might be better off spending around £25 a month, with support thrown in. NB: A bulletin board system (BBS) connection gives you limited email and newsgroup facilities but not a direct link to the Internet and thus no World Wide Web access.

Before approaching an access provider it's essential to think about a domain name – what you want your email address to be. Choose something short which says who you are, so queen@ winsor.co.uk is a good one, elis.sec@win.cas.qofe.co.uk isn't!

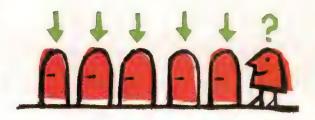


What will it cost?

The more powerful your computer and the faster the communications link between you and the next point on the Internet, the better.

Of course a good system costs money, but the pay-off is that the faster your comms link, the less time you spend online downloading messages or data, which means you'll save money on phone bills. You will also have to pay your access provider a set-up fee and a monthly charge.

When choosing an access provider, it's important to go for one that has a POP (point of presence) close to you. A POP is the network node where you link into the Net and, if it's nearby, you only pay local phone charges (see the POPs chart on page 125).





What equipment do I need?



The basics are a computer (any type will do but most people use a PC or a Mac), a modem and a phone line. However, the minimum specification you should really be looking at for Web-browsing is a 486 PC with at least 4Mb of memory, colour support (preferably 256 colours), sound (either built-in or via an add-on card) and a 14,400bps modem (bps stands for bits per second – how fast the modem can transmit data). If you already own a slower modem, say 9600bps, you can still begin to use the Net – in fact this is a fine speed for email and newsgroups. A 14,000bps (V.32bis) modem can be now be bought for around £150, while the faster 28,800bps (V.34) modems will soon be under £200.

Companies may opt for an even faster ISDN line, instead of the modem/phone line. This gives faster access but the hardware and installation cost more – around £2500. If you are serious about Internet usage and have a lot of people wanting access from the same site, or you intend to offer services such as Web pages yourself, you might go for a dedicated leased line. This will cost around £10,000 a year, but the connection stays open all the time and there are no call costs.

Where do I get software from

Your access provider should furnish you with the software you need to get started, usually on a floppy disc. The basics are TCP/IP software (Trumpet Winsoc for PC, MacTCP for Mac) and PPP (Point-to-Point Protocol) software. After these are installed, you should be able to run any of the commercial or shareware packages for email, FTP (file transfer protocol), newsgroup reading and Web browsing.

Your provider will supply many of these, but after that the best source of software is the Internet itself. The easiest way to get software from the Net is to use an FTP program such as WinFTP for PCs or Fetch for Macs. Many servers allow you to log into them by using the login name anonymous and your email address as the password. FTP programs are very useful and once you've got hold of one, try accessing ftp.emap.co.uk



What do I do when I am connected?

There's no doubt about it, the learning curve for using the Internet can be steep at first. Start by mastering email – to see whether you've got the hang of it send a message to internet@computing.emap.co.uk and put the words 'new user' in the subject line. If you've got it right, we'll send you a reply.

Learn about netiquette (the polite way to address other Net users) and read newbie documents (tips for beginners). If you have a question, check out FAQ (frequently asked questions) files. These are dotted all around the Internet, particularly in newsgroups. When you try out Usenet, sign up to just a couple of groups to start with, otherwise you'll be inundated with postings. Looking at Web pages ought to be straightforward using a browser like Netscape, but patience is sometimes required because, for reasons beyond your control, it's not always possible to locate a host and log on (see page 62 to find out why).



What can I do then?

Well, you can communicate with people all over the world, discuss philosophy, look at works of art of dubious quality, download pornography, check out train times in Garmisch-Partenkirchen, listen to college radio broadcasts, watch Disney movies, set up your own Web pages...The list is endless and, now you're online, so is the time you'll probably spend happily connected to the Internet.





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at password enter

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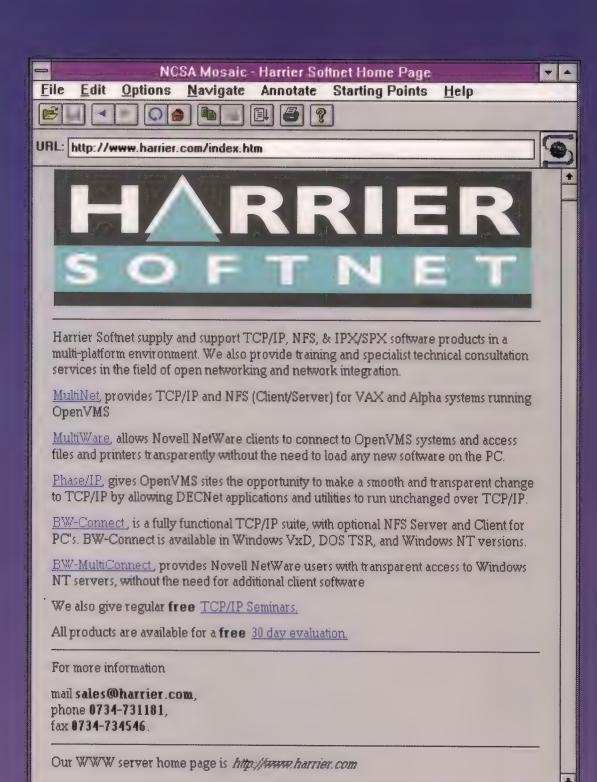
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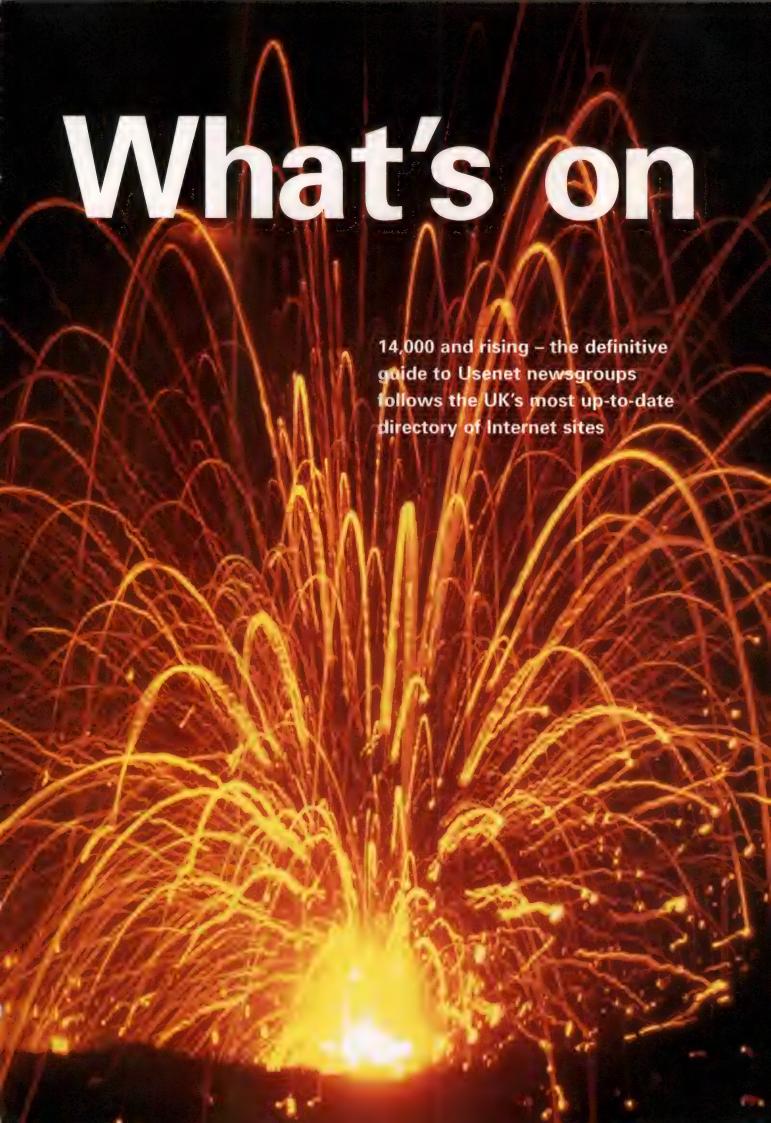
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What's on

he following pages are the most extensive listings ever published in a magazine, but even so, they still represent just the tip of the iceberg in terms of what's out there. Each day hundreds of new pages appear, old ones disappear, and others move to better locations. Cyberspace is a virtual jungle with jewels in the most unexpected places. Seek and ye shall find.

If you have a favourite Internet destination and it's not listed here, email the address, together with what's special about the site, to whats_on@ computing.emap.co.uk (subject: new sites). At the time of going to press all addresses had been checked, but things may have changed by the time you try them. Again, do let us know if you discover an entry has moved. Send new details to whats_on@computing.emap.co.uk (subject: new address).

WHAT IT ALL MEANS

Once you are connected to the Internet, all the addresses should be easily accessible via a multitude of common shareware and commercial packages. If you have problems, feel free to email us and we'll try to reply as soon as possible.

WORLD WIDE WEB

The majority of locations listed are World Wide Web pages those with the http:// prefix. Some sites are highly graphicsintensive, so if you turn off the Load Images option in your Web browser or choose the text-only view, these pages will load faster. This is particularly useful for slow modems. It's possible to access at modem speeds as low as 9600bps, but we recommend 14,400bps as the entry level. Carefully enter the full address, eq http://big.fish. net/Blind~Mullet.html exactly as listed, including capital letters, into the Open Location dialogue box of your Web browser. When using Netscape you can leave off the http://

GOPHER

Gopher allows you to search through databases by simply choosing from successive menus. You can access these from your Web browser in the same way as World Wide Web pages, although a dedicated Gopher client can give better results. Unlike Web pages, which can contain links to anywhere on the Net, you will eventually reach the bottom of the tree. Key in everything after the Gopher: prefix. With a Web browser, like Netscape, precede it with gopher:// eg gopher:// fetch.com/toothy

WHERE TO GET SOFTWARE

The quickest way to get the majority of the software you are going to need is to get it from the Internet itself. Most access providers will supply you with the basics when you sign up (see page 123), but you are sure to want lots of additional software eventually.

Here are some of the more common Internet clients and the anonymous FTP servers where you'll find them. Log in with the username: anonymous and use your email address as the password. We have listed a few options, as some of the home sites can get extremely busy.

Purpose	Package	Path
Email	Eudora	ftp.qualcomm.com
Lindii	Ludora	ftp.emap.co.uk/pub/software/mac
		ftp.red.net/pub/mac/comms/mail/
FTP	Fetch	ftp.dartmouth.com
1 11	retail	ftp.emap.co.uk/pub/software/mac
		ftp.red.net/pub/mac/comms/ftp/
www	Mosaic	ftp.ncsa.uiuc.edu
VV VV V	WIOSaic	ftp.emap.co.uk/pub/software/mac
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	Notocono	
	Netscape	ftp.netscape.com
Usenet	Nuntius	ftp.red.net/pub/mac/comms/www/
Osenet	Nuntius	ftp.emap.co.uk/pub/software/mac
Archie	Anarchie	ftp.red.net/pub/mac/comms/news/
Archie	Anarchie	ftp.emap.co.uk/pub/software/mac
Combon	Toda Conton	ftp.red.net/pub/mac/comms/ftp/
Gopher	Turbo Gopher	ftp.emap.co.uk/pub/software/mac
T		ftp.cyberspace.com/pub/ppp/mac/gopher
Telnet	Teinet	ftp.ncsa.uiuc.edu
		ftp.emap.co.uk/pub/software/mac
		ftp.cyberspace.com/pub/ppp/mac/telnet
PC		
Purpose	Package	Path
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	Eudora	ftp.emap.co.uk/pub/software/pc
	Eudora	
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WWW Usenet Archie	Winftp Netscape Mosaic Winvn	ftp.emap.co.uk/pub/software/pc ftp.red.net/pub/windows/comms/mail/ ftp.cyberspace.com/pub/ppp/windows/ftp ftp.emap.co.uk/pub/software/pc ftp.netscape.com ftp.red.net/pub/windows/comms/ ftp.ncsa.uiuc.edu ftp.red.net/pub/windows/comms/ ftp.cyberspace.com/pub/ppp/ windows/newreaders ftp.emap.co.uk/pub/software/pc ftp.cyberspace.com/pub/ppp/windows/

CYC

FTP (FileTtransfer Protocol) allows you to download any file from a remote computer onto your own. It may work from your Web browser, but it's much better to use an FTP package such as WinFTP, or Fetch. You can access at any speed, but the faster your modem, the quicker the transfer. Key in everything after the FTP: prefix. Depending on your software, you may have to put the path name (all the text after the first single /) in a different dialogue box.

CONNECTION PROBLEMS

So you've resorted to reading the instructions and it still won't work. You've carefully typed in the address three times but keep getting error messages. Don't despair, it happens all the time. There are two basic causes of errors: incorrect addressing and system failure.

Looking at addressing problems first, consider the address as having three parts. Reading from left to right they are: the protocol such as http://, ftp:// or gopher://; the domain name (everything before the first single forward slash); and the file location (everything after and including the first single forward slash).

Netscape is fairly versatile. You don't need to key in the protocol http:// and, depending on your configuration, you can FTP, Gopher, Telnet and access Usenet from the command line. Don't count on it, though, and if you have problems, try using a dedicated program such as Fetch or WinFTP. If they work, but you would prefer to run it all from your Web browser, you may need to tweak your set-up.

Chances are, if you get the error 'unable to locate host', you've keyed in the domain address incorrectly, the address

has changed, the host is offline or you have a connection error.

First, verify that you are indeed connected to the Internet by connecting to a known address. If you succeed, you'll know the problem is specific to that address. You could try inserting or removing the www. prefix as this is a common address change. If the host is temporarily offline, try later.

If you get errors like '404 file not found', you have successfully logged on to the host computer but the file location you have specified either does not exist, has been entered incorrectly, or has been changed. You'll get this message a lot, but with ingenuity you can still find what you want.

Next, check the capitalisation. If the host has a Unix server, file addresses will be case-sensitive. What's worse, Unix programmers seem to delight in long file addresses filled with capitals, tildes (~) and underscores. After a while, they usually shorten them, thus creating a new location.

There are several ways to find the new location. Try adding or removing the slash (/) at the end of the address or log on to the host domain address (type in everything before the first single backslash) and browse through menus and hotlists. If that doesn't work try omitting the file name and then each subsequent directory up the path.

If you are getting errors such as 'connection refused by host' or things seem unusually slow, this may be a connection failure caused by your software, hardware, connection, line, provider or by heavy traffic.

You will find some servers very difficult to get on to during peak hours and they may even be temporarily offline. Your access provider may be overloaded or you could have a noisy telephone line (don't forget to disable call waiting). In these cases, just keep trying or go back later. One more insidious cause might be the Web software itself playing up. If you get refused from three sites in a row, reboot and try again.

IF ALL ELSE FAILS

If you really must find a site, go to Lycos, Yahoo, Harvest, the WWWW or any of the searching tools. Use the distinguishing words from the site's title as the search terms. Failing that, try searching on related subjects. Even if you still can't find what you want, you'll probably discover half a dozen similar, if not more interesting, pages.

What's or

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the ICA and Cyberia. Goldsite Europe looks good, feels solid and generally lives up to its claim to be 'your one-stop Internet information site'.

BBC NETWORKING CLUB

http://www.bbcnc.org.uk/

Access

Providers

This is a growing bulletin board with general information on the BBC's broadcasting schedules and activities. There's public access to TV and radio listings, album charts and even Radio 1's playlist and rotation schedule. The links to, and explanations of, various Internet searching tools and browsers make this a useful starting place for learners. For £5 you can join Auntie, the resident BBS, participate in conferences with programme makers, and access files and other information. No news service is yet available but plans are afoot.

CITYSCAPE GOLDSITE EUROPE

http://www.cityscape.co.uk

Don't miss out on the more arcane corners of the Internet, but if you mean business this is an excellent place to start. You can access news (mostly ads), Internet information, back issues of the *Guardian* online and links to servers and services like the BBC Networking Club, Live at

COMPUSERVE

http://www.compuserve.com

Patchy information designed to persuade you to join up with Compuserve.

DEMON INTERNET

http://www.demon.co.uk

The home page of the UK's largest and fastest growing provider – this is so slow to respond you may suspect your browser has crashed.

EUNET GREAT BRITAIN

http://www.britain.eu.net

The second of two major corporate Internet service providers, EUnet has strong connections with continental Europe. This page has a link to EUnet's main page which then provides links to its European sites. It's a fairly spartan launchpad to heavyweight commercial and media pages so there's no padding and no time is wasted. The link to GBnet gives ample information about EUnet's UK presence.

NETWORK MCI

http://www.mci.com/

At every mouse click, keystroke and step through the virtual tour of Gramercy press, this bloated advertising montage from MCI reinforces its corporate marketing plan. It's all wishywashy, condescending, puffedup hard sell and thus something we, intelligent consumers of the cyberage, tend to reject. If you can battle your way through the guff, you'll find no mention of cost, but you will find a two-month free trial.

PIPEX

http://www.pipex.net

Pipex's approach is certainly very business-like and the user is left in no doubt that this company intends to remain a major presence on the Internet. At first glance, there doesn't appear to be much else here, but if you access the worldserver, for example, you'll find several pages of extremely useful links, most with a heavy commercial emphasis. It's lean but relatively trash-free.

REDNET ONLINE

http://www.red.net

This is not as concise as, say, EUnet's site, nor as overflowing as Netscape's, but it does have a friendly, efficient and unthreatening English accent, which is very refreshing. There are three main sections. Local Services has announcements. items for sale and support groups, while the Laboratory has Internet information. Enter the Black Hole to be sucked into a void of movies, images and sound libraries, plus links to other general, academic and corporate Web servers. You can email Rednet at webmaster @rednet.co.uk

EASYNET

http://www.easynet.co.uk

As the name suggests this friendly-looking page from the UK access provider Easynet is an easy-to-understand introduction to surfing the Net for business and pleasure. You won't be bogged down with any excess verbage; it's all simple and useful, particularly for newcomers. You can link to



VOSSNET

http://www.vossnet.co.uk

New access provider Vossnet offers full Internet access via the Pipeline software. This is a client application that works on a BBS as if it's a full IP connection, so it's similar to TIA (The Internet Adaptor). Vossnet is the first company to use Pipeline in the UK, although it's very popular in the US. It's a cinch to set up and just as easy to navigate through the point-and-click Windows environment. You can download either one of two PC versions of Pipeline here for free, ten-minute trials. To get full World Wide Web access you'll need the larger pack and also at least 8Mbs of Ram. However, under this you're restricted to the less visual aspects of the Internet such as FTP, Telnet, Archie and Gopher.

various shopping, business and start-up sites or be sent straight to Cyberia.

Adult

ALT.SEX FAQ

http://www.halcyon.com/elf/ elf_sternberg.html

Before you launch into showing your colours in the the Usenet alt.sex groups, it's a good idea to read this FAQ first. It covers all the Usenet behaviour and usage protocols, as well as a DIY sex education guide. There are also rigging resources, science-fiction erotica, fantasy, and if you think pocket handkerchiefs are a fashion statement, the decoder might change your mind.

ALT.SEX.MOVIES HOME PAGE

http://www.xmission.com/ ~legalize/asm/asm.html

This page features lists, FAQs, movie reviews, fan club addresses, mail order sources, filmographies and other info relating to the sex flick trade.

BIANCA'S SMUT SHACK

http://bianca.com/shack/index.html

This site - a clickable plan of a house - is an absolute labyrinth of surprises, trap doors and vulgarities. There are plenty of opportunities to add your own thoughts but make sure you read some of the other contributions, too - the masturbation forum is popular and full of frank confessions. The graphics are crude in more ways than one but to explain in too much detail would spoil the impact. However, be warned the deeper you go, the darker and more revealing it gets.

BLOWFISH

http://www.best.com/ ~blowfish/

Blowfish is a mail order company specialising in what it calls 'sex-positive' erotic merchandise. You can access this via a paper or online catalogue and order by email. There's also a sexuality information centre featuring many links to sex-related documents and services.

NEW SIL COTOR

ADULT INTERTAINMENT

http://intertain-inc.com/xxx/

Like many of its genre, this video cyberstore has had so much attention, it's had to go offline to newcomers. However, it's cranking up a new system soon, so expect the doors to suddenly reopen at a mega-bandwidth. Every film for sale has stills as well as samples to download and preview. The shorts are actually highly produced edits and not as explicit as the stills and copy might have you believe. If the number of people trying to access adult sites is anything to go by, businesses like this are going to prosper on the Internet and it certainly is a real commercial venture.

CONDOM COUNTRY

http://www.ag.com/ Condom/Country

Mail order condoms, sex aids, books and humour, but the mere mention of the penis size ready reckoner may prove disquieting to some.

CYBER-SEX TOYS

http://www.webcom.com/ ~dml/sex/intro.html

There's nothing particularly 'cyber' about this selection of standard bump and grind accessories, except for the ordering medium.

KYLIE MINOGUE

http://www.eia.brad.ac.uk:80/kylie/

Provocative lyrics, sexy soundbites, explicit track listings, X-rated videos, lurid scans and access to every Kylie-porn resource thinkable. This one's in the adult section due to Ms Minogue's calculated raunchiness.

LIVE NUDE VIDEO TELECONFERENCING

http://www.cts.com/~talon/

It had to happen. Dial in, pay up, download the software and a private model will call you back. You'll intercept the call with your IBM-compatible PC to find her nude, live and waiting for your instructions. It's a fully interactive experience, but don't worry – she can't see you. Now you can learn about all those difficult to understand female organs without embarrassing your mother.

LOVELINK

http://www.cityscape.co.uk/lovelink/

Advertise or browse for a potential mate – to make contact you must phone a charge call service, using a pin code and leave a message.

PENTHOUSE MAGAZINE

http://www.penthousemag.com/

Penthouse magazine's special Internet edition is so popular, competing traffic can keep you out. Once you're in, though, you'll find a slickly designed professional ezine, with pictures and sections lifted from the paper edition. There's a, err,

family toy department, as well. If you're only reading the ezine for the articles, it's a good idea to turn the graphics off to speed things up.

PLAYBOY

http://www.playboy.com/

A well-designed entry from this top shelf publisher featuring subscriptions, reviews, articles, merchandising, quotes and memorabilia. If you're curious to see what a girl would look like in the nude, you may find it instructive to download the airbrushed photograph.

POINT OF NO RETURN

http://zoom.lm.com/

A bundle of smutty links.

THE HAROLD PALMS COLLECTION

http://www.catalog.com/ hpalms/

These pages are wholly devoted to those who enjoy the pleasure of their own company.

WEB PERSONALS

http://www.netmedia.com:80/date/personals.html

This free cyberdating and friendship service is cleanly organised by country and preference. It's lightly moderated and seems generally harmless.

YELLOW SILK

http://enews.com/ magazines/ys/

Here are extracts and pictures from this 12-year-old erotic journal. Aimed equally at women, you can expect more poetry than limericks, paintings than pictorials.

Art

17TH DIGITAL PICTURE ARCHIVE

http://olt.et.tudelft.nl/fun/ pictures/oldpictures.html

The pornography section of this massive digital picture archive recently closed down due to too much traffic, so now you'll have to restrict your downloads to images in categories such as art, paintings, comics, computergenerated, cars, aeroplanes, faces, nature, technology, space and others.

ANDY WARHOL MUSEUM

http://www.warhol.org/warhol

A good example of how to implement an online art gallery, Pittsburgh's Andy Warhol Museum has the advantage of only focusing on one artist's work. Tours of the physical museum and picture lists are on offer, but downloading at less than 14.4kbps will probably take longer than the paint took to dry.

@ART GALLERY

http://gertrude.art.uiuc.edu/ @art/gallery.html

This digital art gallery has a new exhibition every six weeks, but don't worry, all the old ones are archived.

ART ON THE NET

http://www.art.net/

Here's a well structured place to post your own art or view the creations of others.

COMPUTER GRAPHICS

http://mambo.ucsc.edu/psl/cg.html

This is a heavy page to load. It's a collection of links to numerous computer-generated art resources, using distinct thumbnails as captions.

CONSERVATOIRE NATIONAL

http://www.cnam.fr

Of all the French features, the page entitled 'Femmes, femmes, je vous aimel', is worth a look, just for its randomness. Every time you reload the page a new bikini- or scantily-clad woman appears, for whatever purpose that might serve. Another feature is a nifty picture browser which takes files from newsgroups (such as alt.binaries.pictures.misc) and compiles them into online contact sheets.

HORROR, FANTASY AND THE GROTESQUE IN ART

http://www.ugcs.caltech. edu/~werdna/grotesque/ grotesque.html

This exhibition of visual art sets out to expose and explore principle human anxieties such as fear, religion, paranoia, madness, torture, sex, death and war. There's nothing cheery here.



INFINITE GRID

http://sunsite.unc.edu/otis-bin/showgrid

This is one of those arty sites which doesn't really have a purpose, but the graphics really are superb, which is why we're featuring it here. By using the infinite grid selector, you can tailor this multi-layered psychedelic collage, made up of contributions from users, to your favourite of 12,288,000,000 possible configurations – mindbending. The only drawback is that the resulting images do take a lifetime to download.

LE LOUVRE

http://mistral.enst.fr/ ~pioch/louvre/

A superb tour of Paris' Louvre. There are two exhibitions: famous pictures and a mediaeval art display. Paintings are classified by artist and, although not every work in the museum is included, there is an excellent selection of the most famous. You can even download the rather esoteric choice of accompanying music.

ORIGAMI

http://www.cs.ubc.ca/spider/ jwu/origami.html

There are galleries, Gophers, Postscript diagrams, mailing lists and other paper folding stuff, but still no paperless alternative to this popular Japanese art form.

OTIS

FTP: sunsite.unc.edu/pub/multimedia/pictures/OTIS

OTIS (operative term is stimulate) is an extensive, well planned, Internet art gallery. However, you'll need to be able to view compressed JPEG and Gif pictures to enjoy this wide range of photos, drawings, tattoos, raytraces, video stills,

record covers, sculpture and more. "OTIS is open to all types of image-based expression," the creators say, and some of the material is indeed, err, exotic. To subscribe to the mailing list, send a message to otis-request @cwis.unomaha.edu

PERSISTENCE OF VISION

http://www.uio.no/ ~mwatz/pov/

Persistence of Vision is a popular shareware ray-tracing package which appeals to those who, rather than drawing, prefer to create images as a sum of their mathematical parts. By setting certain constraints such as surface texture, reflection, refraction and light source positions, objects can be replicated so closely, they make photographs look phoney.

STEREOGRAM PAGES

http://mphh2.ph.man.ac.uk/ gareth/sirds.html

This is a launch pad to a large number of sites featuring single image random dot stereograms. There's software, FAQs and plenty of advice as well. In no time, you'll be able to induce a migraine at will.

STRANGE INTERACTIONS

Gopher: amanda.physics.wisc.edu:70/11/show

An exhibition of prints, etchings and lithographs by physicist John E Jacobsen, some of which are superb. Check out the Cybersex sketch – it may not be what you would expect.

THE ART BOOK

http://mmm.wwa.com/tab.html

The Art Book, a colour directory of British illustration, is available free if you qualify, or for the sum of £20, if you don't. See here for more details.

VIRTUAL GALLERY

http://www.atom.co.jp/ GALLERY/

Modern art from Japan, including semi-racy photos by Hisayoshi Osawi featuring subjects in non-sensible shoes.

WRITING ON THE WALL

http://www.gatech.edu/desoto/graf/Index.Art_Crimes.html

A diverse collection of international graffiti art – useful if you're thinking of redecorating your bathroom.

Banks

BANK OF AMERICA

http://bankamerica.com

Here, you can locate your nearest Bank of America branch or ATM, apply for a job or read press releases. If you bank in California there is a special offer which enables you to access and manage your account online. This costs about \$40 per month plus a set-up charge and will allow you to reconcile your books, monitor cheque clearance, transfer and stop payments and view your balance via your PC.

BANK OF IRELAND

http://www.webnet.ie/cust/boi/index.html

The Bank of Ireland was one of the world's first high street banks to experiment with reaching its customers via the Net. Unfortunately, this service has been discontinued, but watch this site for further news.

BARCLAYCARD NETLINK

http://www.barclaycard.co.uk/barclaycard/

This is as staid as you would expect from the UK's largest credit card company. Make sure you choose the text option as the pretty graphics are very slow to load, even at 64k. This service offers an online way of ordering brochures and complimenting the bank via a feedback form. The promise is serious online features such as credit card applications and help desk support, but at this stage it's just the stuff in the leaflet holders you avoid as you're waiting in the queue.

FEDERAL RESERVE BANK OF NY

Gopher:gopher.csc.fi/11/other/intedu/usg/money

This Gopher site gives fairly current information about the Federal Reserve Bank of New York's spot exchange rates, as well as documents on other FRB and Treasury statistics, such as historical money stock data and Treasury yield curve data. There is also a document of exchange rate trends. Keep your calculator handy, though.



RAYTRACED IMAGES

http://www.hmc.edu/~awells/files/raytrace.html

More images created with Persistence of Vision – Ray 2.2, including all the samples in the package plus a range of others gleaned from around the Internet. If you would like to contribute your own, they may well put up a display on your behalf.

FIRST UNION CORPORATION

http://www.firstunion.com/

There's only credit information, product material and press releases here, but First Union is welcoming advice on which services it should offer over the Internet. If it's not available and you want it, use the form and ask for it.

VISA

http://www.visa.com/visa/

Find out about the future of Visa, electronic banking, its product range and your nearest ATM. Will Visa succeed in achieving 'one world, one currency – Visa'. Keep watching this spot.

WORLD BANK

http://www.worldbank.org

This is a good example of how a publicly-funded international body can make its work more widely available. There are complete lists of the reports available, from Rainfed Rural Development in Morocco to Stabilisation and Adjustment in Argentina. Unfortunately, at the moment it's not possible to get entire documents. There are abstracts and keyword searches,

but to get the complete information, you're referred to your local World Bank office, which seems like a missed opportunity.

Books

BANNED BOOKS

http://www.cs.cmu.edu:8001/ Web/People/spok/ banned-books.html

This exhibit of controversial books is presented by Carnegie Mellon University, where the administration recently removed more than 80 sex newsgroups, a matter still contested by the students. You can find out which books have been banned or come under attack, and why. Some titles, like *The Evil Tom Sawyer*, include contentious extracts. Many will regard a number of these titles as essential reading.

CAMBRIDGE UNIVERSITY PRESS

http://www.cup.cam.ac.uk

As well as the standard online catalogue and publishers' details, there is information about future titles, such as the Cambridge Encyclopedia of the English Language.

ELSEVIER SCIENCE

http://www.elsevier.nl

Elsevier claim to be the world's leading supplier of scientific information. On board is a comprehensive list of journals, publications and multimedia products, plus news of forthcoming releases, along with reviews and ordering facilities. Links include an excellent science Gopher and the WWW 94 conference proceedings at CERN.

FUTURE FANTASY BOOKSTORE

http://www.commerce.digital.com/palo-alto

The Future Fantasy
Bookstore specialises in fantasy,
horror, science fiction and
mystery books. You can browse
in the store, get samples of old
and new material, and look at
the exotic cover art associated
with this type of literature. At
present the bookstore is not
accepting payment via the
Net for security reasons, but
expect it to introduce an online
service in the near future. The
store can be emailed at
futfan@netcom.com

KEGAN PAUL INTERNATIONAL

http://www.demon.co.uk/ keganpaul/

This is another dreadfully slow Demon site, but we're told that things will speed up soon. The major educational publisher Kegan Paul is making its entire catalogue available for international mail order and it specialises in works on, and from, the Middle East, Africa, Japan and Asia. There are also some quite interesting snippets of news from around these regions.

LAISSEZ-FAIRE BOOKS

http://www.xmission.com/ ~legalize/lf/Laissez-Faire.html

Laissez-Faire has been a source of libertarian books and tapes for 20 years. It offers titles by the likes of Ayn Rand, Thomas Jefferson, Ludwig von Mises, PJ O'Rourke, Milton Friedman, Thomas Szasz and, of course, Adam Smith, on topics like education, drug policy, gun control, objectivism, free marketeering, economics and humour. You can email order these titles from anywhere in the world.

What's on

MACMILLAN USA

http://www.mcp.com/

The Macmillan USA Information SuperLibrary goes further than most publishers, by not only providing a searchable database of titles, new releases and discounted email orders, but by putting searchable contents pages and full chapter samples for many of its thousands of volumes online. What's more, you can also download copies of any of the software which is included with the company's computer titles, here or from the Macmillan FTP site.

ONLINE BOOKSHOP

http://www.bookshop.co.uk/

It claims to be the biggest online bookstore in the world, with over 750,000 titles available, and that's without including all the other bookstores it's linked to. All are cross-referenced by subject, with brief synopses and links to other related material. Some of the books are available through the shop's central ordering mechanism, while others can be obtained from the publishers.

WYVERN BUSINESS BOOKSHOP

http://www.cityscape.co.uk/ users/ab96/

Here you can buy direct from Wyvern's online catalogue of business books.

Business

AFRICA COMMERCIAL

http://www.africa.com/

This Cape Town service promises to encourage business with and within the newly acceptable South Africa. The facilites are in place, but at this stage not many have taken up the offer. If you want to do business in this region, or are curious about opportunities and protocol, it's an inexpensive place to put out feelers.

ASIA ONLINE

http://silkroute.com/ silkroute/

This silk route to Asia promises to open up the digital doors to

Asian travel, Hang Seng movements, stock price/earnings ratios and commerce in general.

COMMERCENET

http://www.commerce.net

CommerceNet is a consortium of US Silicon Valley companies which have come together to create an electronic marketplace. These extensive Web pages track the development of that interesting enterprise, with thorough and detailed examples of applications. This is absolutely essential reading for anyone who is looking at the Internet from a professional point of view - the future of doing business on the Internet will probably happen here.

CYBERPRENEUR'S INTERNET GUIDE

http://asa.ugl.lib.umich. edu/chdocs/cyberpreneur/ Cyber.html

A massive and crucial collection of links pointing to information relevant to setting up enterprises on the Internet.

DIGICASH

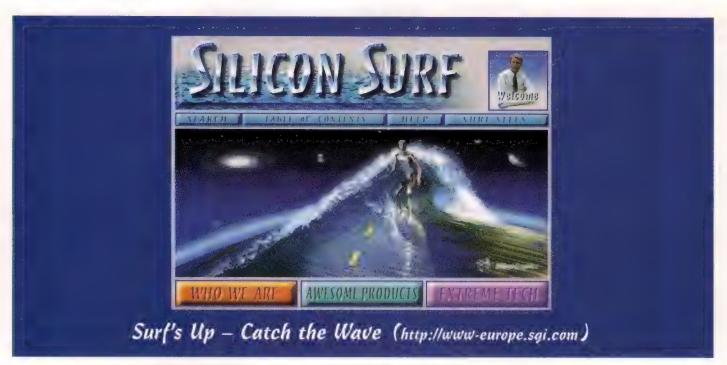
http://digicash.com

Ecash is a recent Internet security initiative and this is its home page. Electronic 'cash' is purchased from Digicash to pay for a growing range of services. This system is the brainchild of an organisation with its roots in bank 'smart cards'. It's still experimental, but the company hopes to set a standard. You can register here, with your own electronic wallet of ecash. There's a growing number of shops participating which are all accessible from this page as well as details on how to start your own.

DIRECT MARKETING WORLD

http://mainsail.com/ dmworld.htm

Resources for direct marketing such as lists, list-builders, copywriters, consultants and agencies. There's a growing employment section, literature for sale and guides to using direct marketing on the Internet. However, the site is poorly laid out and uses far too much bold



To create waves worth surfing you need:

- Tools for creating compelling web content
- Workstations with tools for graphics, image video and audio editing
- The industry's fastest web servers

Check out our WebFORCE products
www-europe.sgi.com
email ukmarketing@sgi.com or call 0800 440440
Silicon Graphics, 1530 Arlington Business Park, Theale, Reading, RG7 4SB

type, despite being compiled by people who should be experts in correspondence.

DYNAMIC BUSINESS INFORMATION

http://www.dbinfo.co.uk/dbinfo/

The first thing you might notice about this site, UK Network Innovation's first creation, is its divergence from the accepted paradigms of site design. It has borderless buttons, blue text and prolific use of Netscape enhancements. For a small fee, Dynamic Business Information will undertake to supply online credit reports on any individual or business worldwide.

ENTREPRENEUR NET

http://www.cyberzine.org/ html/Entrepreneur/ enetpage2.html

Here you'll find a wealth of links to business resources and commercial sites. The Classic Internet Ad Samples have loony products for sale, such as the talking fork, the yummy yummy toothbrush, the swearing key ring and the rapping Christmas tree. Possibly the most capitalist site on the Web.

FEDEX

http://www.fedex.com/

Federal Express has revolutionised the way companies haul freight, take orders and service customers. This foray into online parcel tracking marks yet another transport industry first.

INTERNET BUSINESS DIRECTORY

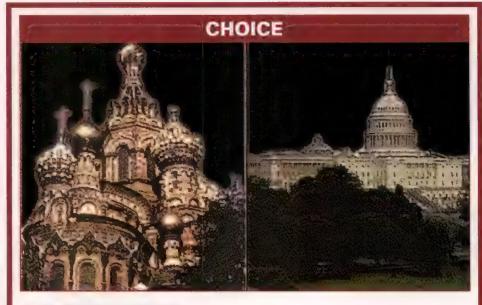
http://ibd.ar.com/

This is an attempt to collate business pages and resumés into a easy-to-search directory. It's not particularly well structured, but it's yet another place to look.

MECKLERWEB

http://www.mecklerweb.com

MecklerWeb is US publisher MecklerMedia's commercial Internet presence. This tight professional site is setting a high standard with daily Internet news, company announcements, a multi-storey shopping mall, net happenings and smart advertising promotions – you really feel the fog is clearing and whole thing is coming together.



FRIENDS AND PARTNERS

http://solar.rtd.utk.edu/friends/home.html

This Russian-based information service is a joint venture with the US and aims to help create a better understanding between the two nations – hence the cheery site name. There is plenty of information to be found here on topics such as economics, education, geography, music, weather and health, plus a literature section which contains the full text of *The Brothers Karamazov* and *Anna Karenina* (unsurprisingly both are fairly large files). There are also resources which attempt to encourage business alliances between the two countries, but the travel information is a bit light.

MILLENIUM

http://www.milfac.co.uk/milfac/

This site currently has information on over 26,000 UK companies and the aim is to expand to 3 million, which will also include a large proportion of European listings. You can search by product or service category or by name. At the moment it's a very slow service, probably due to the access provider, but this may change.

ON RAMP

http://www.ramp.com

This site aims to be an Internet 'one-stop shop', providing access to dozens of popular addresses. The road motif is used throughout as you journey down the highway, with exits to various places. The business section includes banks, stock market prices, Wells Fargo business services and the US Patent Office. The rest stop offers humour, a huge games section and Internet chat lines. You can check out clients' diverse home pages or visit the products and services area for trips to art galleries, bookstores, health clubs and restaurants. This is a great site for all the family, with lots to see and do.

THE COMPANY CORPORATION

http://incorporate.com/tcc/ home.html

The Company Corporation will incorporate your business in the State of Delaware (very useful for US citizens looking for tax breaks) and kindly look after all your accounting obligations, for a reasonable fee. All the details, like fictitious name applications, are here, but if you need more they're eager to help.

THE INTERNET GROUP

http://www.tig.com

The Internet Group (henceforth known as TIG) is another doing-business-on-the-Internet enterprise. As well as pages on TIG's publishing, consulting and seminar services, there are also links to services offered by its clients, plus substantial information offerings about the commercial use of the Internet. If you're planning business or professional use of the Internet, TIG is an essential destination. Its Hot Sites page provides links for commercial users in various categories, such as travel, government, financial services. legal services, shopping malls and storefronts.

WALDMAN'S WORLD OF NET ADS

http://www.hhcl.com/ wwoa.html

Imagine how advertising agencies must be rubbing their hands together with glee, thinking of the prospects this brand new medium offers. Watch this spot to see how they're going.

WILSON KELLER AGENCY

http://www.aztec.co.za/wka/ wka.html

Nothing but unashamed puffed up self-promotion from this South African advertising agency, with such gorgeous graphics that you'll overlook the corporate rhetoric. What's more, it just might bring them business.

Community Groups

IGLOO

http://access.digex.net/ ~erewhon/

Find out here how to go adventuring with Igloo,

What's on

the International Gay and Lesbian Outdoor Organisation. A current calendar, address lists, trip leaders' guide and information about the adventures are all included.

IRANIAN CULTURAL INFORMATION

http://tehran.stanford.edu/ www/tehran.html

Iranian/Persian interests such as a routine which generates Persian script from ASCII, recipes, Persian calendars, virtual maps, literature, art, Islam and cultural events.

MIT ARAB STUDENT ORGANISATION

http://www.mit.edu:8001/ activities/arab/homepage.html

If you've been looking for pointers to Arabic pages this is your lucky day. Apart from details and news of this student organisation, there are links to Arabic software suppliers, student groups, cultural organisations, reference works, photo libraries, Middle Eastern servers and other Arab-related pages, sorted by country of origin.

QUEER RESOURCES DIRECTORY

http://vector.casti.com/QRD/. html/QRD-home-page.html

A massive homosexual resource of information on Aids, legal news, attitude trends, clubs, publications, broadcasts, images, military gays, political action and community groups.

Computer Hardware

APPLE

http://www.apple.com

This site offers a plethora of information and resources; everything from Apple's press releases through to current product information, technical support and developer data, together with links to other Internet sites that hold Applerelated information.

COMPAG

http://www.compaq.com

This is an excellent example of how PC hardware servers should be presented. The home page offers a choice of text or graphics. The subsequent index pages are scaled to fit neatly on a PC screen – easy to do but hardly ever done. The content is a good mixture of information and marketing material, plus product support, including a wide selection of downloadable files. Other vendors would do well to read these pages for a few ideas on how they can present themselves in a professional manner.

CREATIVE LABS

http://www.creaf.com/

Creative Labs, makers of the Sound and Video Blaster series, offer news releases, FTP links, support advice, employment opportunities and product details. There's not much here at this stage, but it's all you really need from this specialised multimedia firm.

DELL

http://www.us.dell.com

This site has one focus – serving Dell, the world's top mail order PC manufacturer, and its clients. There's online access to spare parts, technical support, BBS files, catalogues, press releases, Dell online service and the Dell international phone list. The site has all the charm of a chartered accounting firm's year-end report. If you use Dell and need files or support, it's probably very efficient.

DIGITAL

http://www.digital.com

This is the main Digital home page and it provides links to other Digital web servers and to professional associations sponsored or supported by the company. It all adds up to a pretty comprehensive service for Digital customers, devoid of fancy graphics and marketing puff but on the whole it could be a bit more colourful. There are, however, a few whimsical links to the likes of the Palo Alto Cloud Gallery and the Future Fantasy Book Store.

DIGITAL COMMERCIAL SERVICES

http://www.commerce. digital.com/

Designed to show off what Digital can do, this is an almost inexhaustible collection of tourist information about the town Palo Alto – essential reading if you're holidaying there, but of only marginal interest if you're not. Along with out-of-date advice on how to avoid traffic jams during the World Cup, the Caltrain timetable and a promo for Cloud Gallery, a CD-Rom of 'passionate and powerful sky backgrounds', there are screens and screens about Mary and Michael's Wedding Photography. This material is hardly a serious advert for Digital, although it's not without its amusing moments.

HEWLETT-PACKARD

http://www.hp.com

HP's recently-improved service includes access to drivers and patches for peripherals and other hardware products. This is a good example of how a properly set up Web server can deliver easy, cheap support.

IBM

http://www.ibm.com

A colourful compendium of IBM marketing information with a strong emphasis on the company's technological prowess, but there's no technical or support advice and if you're having problems with OS/2 3.0,

you'll have to look elsewhere. There is, though, the novelty of a spoken message from IBM chairman Lou Gerstner. One of the strong points of this site is that it seems to be updated regularly, but it could do with more technical 'bottom'.

INTEL

http://www.intel.com

Product and support information and a list of 'off-ramps on the infobahn'. There are some handy pointers profiling Internet users and a neat set of graphical usage statistics.

MOTOROLA POWERPC

http://www.mot.com/ PowerPC/

Through the IBM/Apple co-venture, Motorola looks poised to turn the microprocessor world upside down, yet again, with its Risc processor. If you've been fortunate enough to use the PowerMacs, you'll be familiar with the technology that's tipped to become the next generation. This site will provide news about, and support for, the chip and its associated software.



SONY

http://www.sony.com/

This US site of the Japanese electronic and multimedia giant features news, service and support, product information and material from its huge stable of film, music, publishing, video, games and electronics interests. There are even audio pages for top music talents such as Mariah Carey, Black Sabbath and Oasis. The opening screen has shiny buttons to press to access the different areas of Sony activity and the graphics are very smart. However, if you've got a slow modem they will take time to load. It's a professional product so it's something of a shock when you discover certain areas are still under construction.

NEC IN JAPAN

http://www.nec.co.jp/ index_e.html

This is another megalomaniacal corporate tribute page, this time from electronics giant NEC. The pages are bland and offer little of interest other than a basic product listing. In fact, there seems little point in creating them, other than to show traditional Japanese respect for the chairman. You can check out how he feels about it because the only image is his – and he looks pretty bored as well.

NOVELL

http://www.novell.com

Novell, the company behind the NetWare network operating system, has made a big move recently to shift its support and information services to this Web server. What has been available through CompuServe Netwire for some time is now here. If you have local call or ISDN Internet access, this is the cheaper alternative. In a simple and straightforward fashion, Novell is up there with Microsoft showing how the Internet can be used to deliver value to users.

POWER PC MAGAZINE

http://power.globalnews.com/

Power PC magazine, edited by industry man-about-town Chris Rose, publishes every two weeks and offers a neat twist to the usual electronic mag story. When you subscribe (free), you receive the contents page by email. This alerts you to retrieve the stories. Big stories are subsequently sent to you at any time, when they break, by email and they appear under the heading PowerFlash.

SUN MICROSYSTEMS

http://www.sun.com/

Information about Sun Microsystems, its products and support, as well as research and technology news such as the Sunergy satellite broadcasts. There are links to other Sun sites, located in London, Singapore, Tokyo, Moscow, Johannesburg and Hong Kong, and these provide easy access to public domain software, Sun and government information, as well as material such as the Internet Underground Music Archive. Sun is one of the foremore players in encouraging the development and the use of new technology on the internet, so keep an eye on this site.

UK UNIX USER GROUP

http://web.dcs.bbk.ac.uk/ ukuug/home.html

All things Unix can be found here, courtesy of the UK Unix User Group. You can access membership details, a substantial software archive, a newsletter and links to other relevant sites. If you're into Unix in a big way this is a must.

Computer Software

ADOBE SYSTEMS INC

http://www.adobe.com

Stop here for information about Adobe products and support. The reader software Acrobat is available for download and you'll find plenty of PDF (Portable Document Format) files and site links to browse.

HARRIER SOFTNET

http://www.harrier.com

A simple, unpretentious set of pages giving technical information about TCP/IP products distributed by Harrier in the UK and France, including seminar dates as well as in-depth technical information.

IBM OS/2

http://www.ibm.net

This page is what you would expect from industry heavyweight IBM. There are links to travel, shopping, libraries, PC information, sports, news, cool and new sites, business advice and most things you can think of. However, be careful not to click on the home page pointer unless you really need a run-down on IBM products. This will be the home page for OS/2 users and is a great resource.

LOTUS DEVELOPMENT

Email: support@ccmail

Electronic mail support for Lotus's cc:Mail, the second most popular commercial email pack.

MICROSOFT

http://www.microsoft.com

This major effort by Microsoft

will show computing companies how to extend their services through the Internet. Although the Web site is still under development, there's a large amount of information for developers and Microsoft product users. This includes sections of information about Windows and Wolverine - the new 32-bit TCP/IP stack for Windows. It's also possible to get access to patches, sample code and text files. This will be a major Internet resource and is also available via FTP at ftp.microsoft.com and Gopher at gopher.microsoft.com

ORACLE

http://www.oracle.com/

News and information about Oracle's database product range is available here.

QUARTERDECK

http://www.qdeck.com

Information and downloading point for Quarterdeck's Mosaic for Windows and HTML WebAuthor for WinWord 6.0.

SOFTWARE.NET

http://software.net/

The time can't be far off when it's standard practice to distribute commercial software either via a secured Internet connection or by direct dial access. Software.net is close to achieving this here, with several titles for download through a secured link. Most, though, are conventionally boxed for Fedex delivery.

SPRINGSOFT

http://www.springsoft.com/

Springsoft is a European publisher of Windows software. Here's where to explore and download its products.

SYMANTEC

http://www.symantec.com

Product information, news, service and support, company details and a very good set of links to other vendors.

TOOLS FOR WINDOWS

http://whiz.mfi.com:80/msj/

Search the database for things that interest you in the 1994-1995 Tools for Windows product guide, produced by Miller Freeman Inc. The company's Microsoft Systems Journal's



MATLAB

http://www.mathworks.com

The MathWorks home site includes information and support for all the company's scientific and engineering software, for example a 'work around' on the problems caused by the Intel Pentium processor. There's also a listing of Matlab-based books and an extensive list of the trade shows the company will be exhibiting at in 1995. Of marginally more interest is a gallery of mathematically created art which could do with some more entries – if you're a whiz with Matlab software. The buttons are really cute (they look like Refreshers) and there's an FTP site at ftp. mathworks.com

home page will be available soon, also from this site.

VISUAL NUMERICS

http://www.vni.com/

Visual Numerics supplies
Fortran and C library tools,
visual data analysis (VDA)
software and scientific
presentation graphics software.
Its products include the IMSL
libraries, the PV-WAVE family,
and Stanford Graphics. Apart
from furnishing product details
and technical support, this site
intends to act as a forum and a
launch pad to the anonymous
FTP server.

WORDPERFECT

FTP: ftp.wordperfect.com

This is a dull effort by WordPerfect. All you get is access to product literature and a list of telephone support costs. No obvious access to patches and fixes or new products. Presumably that will come.

Education

ANIMAL INFORMATION DATABASE

http://www.bev.net/education/ SeaWorld/homepage.html

This database has been set up by Sea World USA as an educational service for teachers and children. There's information, games, teaching guides and quizzes about animals children love, like whales, dolphins, gorillas, lions, tigers and walruses. It's set out in an interactive fashion, to make it fun learning some of the more laborious details of scientific classification, latin nomenclature and biological value.

INTERACTIVE FROG DISSECTION

http://curry.edschool.virginia.edu/~insttech/frog

This online tutorial is just one of the great educational resources on the Net. It sets out to teach you how to be nifty with a knife in the biology classroom and is aimed at US high schools, so it's suitable for UK secondary students. The text is admirably clear and the movies alarmingly to the point. This is not for the squeamish, but then again watching a frog being hacked to pieces on screen is probably preferable to doing it yourself.



SILICON GRAPHICS

http://www.sgi.com/

This is a stylish and colourful selection of offerings from Silicon Graphics, maker of design, graphics and animation workstations. It contains the usual lists of products and recent press releases, together with more off-the-wall sections, like Free Lunch – a free selection of graphic images and movie clips created by SGI's customers on its graphics workstations. All this, plus a list of technical documents and information for investors in the company.

INTERPEDIA PROJECT

http://www.hmc.edu/www/interpedia/index.html

The Interpedia Project aims to bring an online encyclopedia to the Internet. Here you can find out more about the project or obtain details on current and experimental information resources around the Net.

MATH MAGIC ACTIVITIES

http://www.scri.fsu.edu/ ~dennisl/topics/math_magic.html

These card, rope, and calculation tricks require no mirrors, just a basic understanding of mathematic principles.

MOSCOW ALTERNATIVE SCHOOL CENTRE

http://www.fsr.com/~janesta/masc/index.html

Moscow, Idaho but this isn't your average high school, with hours from 3pm to 9pm, five-week terms, tailored enrolment and the option of external tutoring. Check out the graphics and read the school's story. There are also some educational links here but they're pretty basic.

NCET

http://ncet.csv.warwick.ac.uk/index.html

The National Council for Educational Technology (the government quango for IT in education) offers a range of information, including advice to parents on computer usage and suggestions for schools on how to control Internet access. The pages are focused, updated fairly regularly and, best of all, relate to the UK, not the US, education system.

WEB66

http://web66.coled.umn.edu

Web66 aims to provide information for students and teachers to integrate the World Wide Web into education. There are links to What's New for kids, school WWW servers, excellent site building tutorials and navigation lessons for newbies.

Employment

CAREERMOSAIC

http://www.careermosaic.com/

By far the most professionally constructed employment service

on the Internet. You can search through its home database which features a rapidly growing field of heavyweight clients, such as Chemical Bank, Intel and National Semiconductor, or use the browser to scan the Usenet groups. As with most employment sites, there's plenty of advice on resumés, career trends and salaries. Each client has its own set of pages with extensive details on its employment conditions and corporate activities.

INTERACTIVE EMPLOYMENT

http://www.espan.com/

Job listings and advice on hunting and presentation, with tons on offer, mostly in US Fortune 500 companies. You can search by region or job type. However, it's a big clumsy system and you'd have to wonder if the jobs are current.

IT JOBS WWW SITE

http://www.britain.eu.net/ vendor/jobs/main.html

Efficient selection and sorting routines make this a handy service. Job listings are updated by several professional employment agencies.

JOB OPPORTUNITIES IN ENTOMOLOGY

http://www.colostate.edu/ Depts/Entomology/jobs.html

Looking for an international placement in apiculture, acarology or insect comparative morphology? Try here.

JOBS AT CREATIVE LABS

http://www.creaf.com/www/decjob.html

Engineering, IT, marketing, sales, support and programming staff wanted at Creative Labs, home of Sound Blaster.

JOBS AT MICROSOFT

http://www.microsoft.com/ pages/services/jobops/ toplevel.html

International graduate, design, development, testing and marketing jobs available throughout Microsoft.

ONLINE CAREER

Gopher: gopher msen.com

Here job-hunters in the US and Canada are invited to browse profiles of companies which are actively recruiting staff. Vacancies are classified by state and city, and many have contact names, a full job description and an email address. There is also a section on how to construct a CV and once you've done that you can post it to thousands of potential employers or a carefully targeted few. Each CV posting lasts 90 days, after which it is removed. If you're still searching, just re-submit it.

PRICE JAMIESON

http://www.gold.net/ PriceJam/

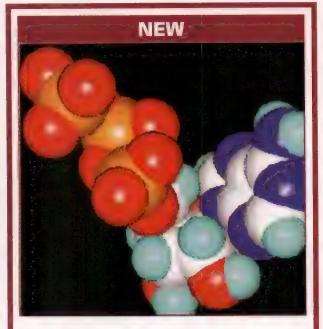
This international recruitment agency intends to place all its professional job listings online, updating them at least weekly. After you've qualified by sending in your CV, with a bit of luck, they'll call you in.

Entertainment

ARNIE QUOTE GENERATOR

http://www.ora.com:8080/cgi-bin/ora/arnie

Each time you reload you are greeted with a fresh Arnie-ism



KIDS WEB

http://www.npac.syr.edu/textbook/kidsweb/

Choose from a range of 19 main subject categories of educational interest. Don't be put off by the 'kids' emphasis. There's something here for you. Other links include instructions on how to set up a Web server in your classroom and a collection of other sites set up for children.

and a chance to submit your own.

ASK JOE

http://fishwrap.mit.edu/ News/AskJoe/AskJoe.html

You can ask Joe anything, and, if he feels like it, this MIT chemistry student will answer. You can read past questions and answers in the archives to make your own judgment on his competence.

ASTROLOGY

http://www.dircon.co.uk/ networks/stars.html

Look here for weekly updated astrological predictions, astrology FAQs and links to other soothsayers. There's still no forecast for the 13th sign.

BEST-QUALITY AUDIO WEB POEMS

http://www.cs.brown.edu/fun/bawp

These pages have the dubious aim of recreating the experience of live poetry readings, by downloading recordings. It's not hard to live up to the claim of 'best quality' when you have no competition. Should another come online this might very well be redubbed 'worst'.

BUILD A CARD

http://infopages.com/card/

Compete for the tackiest virtual Valentine or greeting card, with this ingenious step-by-step online art studio.

CATHOUSE BRITISH COMEDY PAGES

http://cathouse.org:8000/ BritishComedy/

You can find links here to a multitude of, mostly British, comedy archives and sites around the Web, featuring acts such as the Goons, Alan Partridge, Absolutely Fabulous, Bottom, Blackadder, Carry On films, Douglas Adams and Ben Elton. This site is also home to the Bricomedy Digest, an e-zine devoted to past and present British humour.

CYBER-TOWN, ARTS AND LEISURE

http://www.cityscape.co.uk/ cyber-town/index.html

This home page points you to places that are exotic, like the Gates of Darkness, or educational, like the Louvre. It's a useful place to learn more about the Internet and it's also a good page for recreational use.

CYBERIA

http://www.easynet.co.uk/ pages/cafe/cafe.htm

This is the home page of the UK's first Cybercafé, featuring loads of links to fun spots such as art galleries, astrological forecasts, cool sites, museums, film databases, music pages, UK guides, a virtual nightclub, sports pages, campaigns and even a dating agency. This ultrahip café located in the heart of London's West End, is an ideal place to connect directly to the Internet at 64k, without the costly overhead. If you can't make it down to Cyberia in person, look in the guide to cybercafés around the world. Maybe there's one opening near vou soon.

CYBERSIGHT

http://cybersight.com

A great arty home page with a friendly groovy feel. There are links to favoured and unfavoured sites, chat forums, games, trivia, as well as all sorts of opinion polls.

EXPO TICKET OFFICE

http://sunsite.unc.edu/expo/ticket_office.html

Here's a refreshing alternative to the usual hot site theme park, presented by the US Library of Congress. You can jump aboard a virtual bus to tour exhibits of the Vatican, Soviet archives, European exploration of the Americas, Dead Sea Scrolls, Museum of Paleontology and the city of Spalato. After all that, you're dropped off at the Expo Restaurant to sample its daily masterpieces of French cuisine.

FASHION PAGE

http://www.charm.net/~jakec/

With so many fashion magazines swamping the newstands, it's not surprising that they're starting to make an appearance here. They're not entirely suited to the medium, though. Being image driven slows down page delivery and, fashion being fashion, it's out of date immediately. This site favours a more textual approach, a little like hearing about it on the radio.

FIND THE SPAM

http://spl.berkeley.edu/findthespam.html

There are many sad and lonely people who find the

tinned, spiced, reconstituted pig offcuts known as Spam an endless vehicle for ridicule and amusement. If you are one of them, this page is for you. You can even add your own spammatical witticism to its bulletin board.

JUSTIN'S UNDERGROUND LINKS

http://raptor.sccs.swarthmore.edu/jahall/

Almost every link from this popular and well-maintained site is worth a look. There's a focus on the clandestine, the visual and the bizarre. There are simple instructions on how to publish your own pages and even advice on how to hack HTML. If you're looking for the most twisted sites on the World Wide Web, college student Justin's choice of the weird, the wild and the wonderful is a fine place to dive in.

LAUGHWEB

http://www.misty.com/ laughweb

Humour of all sorts, even quips about Intel's Pentium mishap.

LOCKPICKING

http://www.lysator.liu.se/mit-guide/mit-guide.html

Thanks to the great minds at MIT, an indispensible illustrated lock-picking guide for potential felons. They laughed when I told them I was learning to burgle, but when they came home...

MIRSKY'S WORST

http://turnpike.net/mirsky/ Worst.html

If your page turned up here, you think you'd have to be doing something very wrong. Well not necessarily. While some of Mirsky's choices are genuine shockers, others are actually quite entertaining in their ineptitude. Not knowing until you get there makes it something of a lucky dip. In fact, it's worth a spot in your bookmarks.

PRACTICAL JOKES

http://www.umd.umich.edu/ ~nhughes/htmldocs/ pracjokes.html

This collection of larks and laughs at others' expense has

been compiled from the Usenet archives of alt.shenanigans

QUILTING

http://ttsw.com/ MainQuiltingPage.html

Got nothing better to do than sit in front of the fire making your own quilts? This site will answer all your questions and point you to designs and fabric sources. However, you should try and get out more.

QUOTE GENERATOR

http://www.ugcs.caltech. edu/~werdna/fun.html

This is a clever interactive one-at-a-time purveyor of quotes from such sources as Dan Quayle, Dr Who, Webster's, Zippy (he from Rainbow?) and your mum.

ROME LAB SNOWBALL CAMERA

http://www.rl.af.mil:8001/ Odds-n-Ends/sbeam/ rlsbeam.html

Try your luck throwing virtual snowballs at Rome Laboratory's engineers.

STEVEC'S UUUUUU

http://ftp.std.com/homepages/ stevec/index1.html

This set of very original and often funny gags contains more sophisticated irony than most similar sites.

THE CREATIVE INTERNET

http://www.galcit.caltech.edu/ ~ta/creative.html

This is a major source of information about pop culture, with extensive sections on music and television. The Complete TV Guide includes the ultimate TV list which contains more than 135 links to information about 35 TV series. The best coverage is, unsurprisingly, devoted to Star Trek, with The Simpsons and Married With Children following close behind. The lists include newsgroups, mailing lists and Web pages. The ultimate band list offers more than 752 links to info about 177 bands. There's also the Internet's 'hottest music links'. See if you agree.

UK NATIONAL LOTTERY

http://ribble.csc.liv.ac.uk:80/ users/rkl/lottery/

Everything you need to know about the UK lottery – statistics, winning numbers, draw details, numerical analysis and instructions. Everything, that is, but the only thing that matters.

VOICE SYNTHESISER

http://utis179.cs.utwente.nl: 8001/say

Enter your profanity, hit return and wait for the response to be automatically launched by your sound player for the mirth of all within earshot. Spell words phonetically for greater success.

ZODIAC FORECASTS

http://www.metawire.com/stars/

Free forecasts for each star sign are posted here daily, but to get personal and yearly charts you'll need to send money.

Exhibitions

THE INTERFACE GROUP

http://www.comdex.com:8000

The Interface Group is the



ANIMATE AGENT LABCAM

http://vision.uchicago.edu/cgi-bin/labcam

Another one of the many cameras on the Internet – with most of them the technology is impressive, but there's nothing worth looking at when you get there. However, this one's worth a visit because it gives you robot control over magnification, colour, image enhancement and brightness, and you can point at the photo to direct the zoom. It's not quite obvious what these variations do to the camera itself (the image enhancement is a particular mystery), but they do give you a real sense of interaction, which is still a sensation often lacking in the wonderful world of the Web. The guy in the picture actually moves on occasion, but as you can see, the room itself is pretty bland. You often get the feeling that some online cameras are a bit of a con – returning the same Gif image each time you reload – but its pretty hard to tell with inanimate objects.

organiser of the major Comdex series of computer trade shows. These pages offer exhibitor lists, conference schedules, travel and accommodation, and visitor registration information. At present, though, you can't register online for any of the events – an application that surely can't be far off. An important challenge for exhibition organisers is to keep their pages up-to-date.

ZIFF-DAVIS EXPOS

http://www.zdexpos.com

An awful-looking home page in conjunction with poorly-structured information mars a useful collection of Web pages that provide exhibitor lists, conference programme details and other information about the Networld and Interop exhibitions in the US, France, Germany and Japan. Ziff-Davis pioneered online registration from this site and the server is certainly one to watch. Ultimately, the company has plans to run Internet exhibitions.

Ezines

EZINE-LIST

http://www.ora.com:8080/ johnl/e-zine-list/

Probably the longest list of electronic magazine links available on the Web. Unfortunately there are no attached descriptions so unless the title is self-explanatory it's a hit or miss affair.

FACTSHEET FIVE -ELECTRIC

http://kzsu.stanford.edu/uwi/f5e/f5e.html

Home to weird ezines such as Addicted To War, Tarot News and Psychotronic Video.

NETSURFER DIGEST

http://www.netsurf.com/nsd/index.html

Subscribe and receive a weekly free list of reviewed Web sites written in either HTML or plain text. Current and back issues are also available online. It's better to subscribe to the HTML version as Netscape can take advantage of its links. This service is funded by the Netsurfer Marketplace, the online shopping mall, which can also be reached from this address.



LEGO HOME PAGE

http://legowww.homepages.com/

It's a bit too good to be a mere plaything, this Lego stuff. Surfing through these pages of robots, raytraced models, production line updates and other Legophernalia will make you yearn for those bygone days of playing with plastic blocks. It's amazing how many people must spend their time creating 'still lifes' of these clickable little bricks – it's an art form and a visit is cheaper than a trip to Denmark.

NSF NETWORK NEWS

http://www.internic.net/ newsletter

A free newsletter about the evolution of the Internet available in hard copy and electronic formats.

PHRACK MAGAZINE

http://freeside.com/ phrack.html

First published in 1985, Phrack magazine has printed controversial and often anarchic articles for the hacker community. You can download or browse back issues and subscribe free to the quarterly.

PSYCHE JOURNAL

http://hcrl.open.ac.uk/psyche/psyche

An electronic interdisciplinary journal of consciousness research with articles, commentaries and book reviews on such subjects as vagueness, semantics, the language of thought, delineating conscious processes and contrastive analysis. When you've figured that lot out, you can test the links to other philosophical Gophers and online resources.

THE ETEXT ARCHIVES

http://etext.archive.umich.edu/

An archive of electronic magazines which you can Gopher search by name or title.

TRAVELS IN HYPERMEDIA

http://www.york.ac.uk/~jjrk1/

As well as links to pages of basic information about the Internet – like the Big Dummy's Guide – this site includes scholarly, illustrated discussions of hacker culture and the politics of cyberpunk, pornography and the sexual aesthetic of the Internet

URBAN DESIRES

http://desires.com/desires/ ud/l.l/urban_toc.html

Billing itself as an interactive magazine of metropolitan pleasures, this glossy modern ezine really delivers. It has well written modern city stories on technology, eating, sex, music, art, performance, style, politics and more. There's even a lengthy gruesome comic strip which, despite its graphic detail, loads quite quickly due to a clever three-part download. If you're thinking of publishing

comics or graphics on the Internet, don't miss this site.

WIRED

http://www.wired.com

Until recently, the world's hippest publication, a style magazine about technology, delivered some of the world's dullest Web pages. Now, though, *Wired* is steadily evolving its electronic product into HotWired. Keep checking on this because it's getting better all the time, and the title itself is now being distributed in the UK by the *Guardian*.

Film and TV

BEAVIS AND BUTTHEAD

http://calvin.hsc.colorado.edu/

Much what you would expect from a rabid fan of MTV's pop culture analysis, as seen through the eyes of two dysfunctional juvenile delinquents.

BIG MAC'S MONTY PYTHON ARCHIVE

http://www.xs4all.nl/~bigmac/python.html

Visit this site for a copyright-

What's or

abusing compendium of Monty Python's Flying Circus pictures, clips, audio and scripts. The big drawback for Python fans is that the only way to download them is to pay in DigiCash (see under Business) – perhaps the wackiest ever way of trying to create a de facto standard.

BUENA VISTA PICTURES

http://bvp.wdp.com/BVPM/

This site presents previews of forthcoming mainstream movies from Touchstone and Disney. The title screen is an oldfashioned movie house. Walk through the doors to watch excerpts from new films, interviews with the stars or read press releases. If you have a good system and movie player. plus the patience to download the minute-long video cuts, you will be delighted by the quality. Be the envy of your friends as you watch previews of up-and-coming pictures like The Goofy Movie or Pocahontas time and time again.

CAPT JAMES T KIRK SING-A-LONG

http://www.ama.caltech.edu/ ~mrm/kirk.html

Audio excerpts from William Shatner's bold vinyl masterpiece 'The Transformed Man'. Inspiring stuff!

CARDIFF'S MOVIE BROWSER

http://www.cm.cf.ac.uk/ Movies

An exceptional relational database of movie, cast and review information, selections can be cross-referenced to find an actor's complete biography by clicking on their name in another cast list. Most films are rated by online voting and users can contribute. If you have even the most transient interest in film, you must check this out.

CHANNEL 4

http://www.cityscape.co.uk/ channel4/

This page forms part of Channel 4's follow up service. If you missed that documentary about Brazilian street children all your friends are talking about, or if you saw it and just want additional information, drop into this site. Contact details for programme participants are usually up here and you sometimes find complete scripts, too.

HONG KONG MOVIES HOME PAGE

http://www.mdstud.chalmers. se/hkmovie/

This site features plenty of information about the action director's director John Woo, his catalogue, plans and profiles of actors such as the genius Chow Yun Fat, If you've seen any of his gems such as Hard Boiled, The Killer or God of Gamblers, you'll know why he's received such cult notoriety. But it's not all Woo and Fat, there's plenty more, including a searchable database, MPEG movies, images, FAQs, interviews, news Gophers and even the Hong Kong Popstars Archive.

MCA/UNIVERSAL CYBERWALK

http://www.mca.com

New features from the MCA/Universal stable, presently featuring interactive premieres of Arnie's *Junior* and Kylie and JC Van Damme's *Streetfighter* – a glittering showcase of the finest acting talent available to MCA.

MTV ODDITIES

http://mtvoddities.viacom.com

Animations, soundbites, graphics and airdates for MTV house pets, like the Head and Beavis and Butthead are available on this site. However, only Head footage is featured in these infant days.

PULP FICTION

http://www.elmail.co.uk/ movie/pulp

If the Internet is your only contact with the outside world, you may not yet have overloaded on the hype surrounding the release of Tarantino's Cannes winner. Those with a fixation on the incomplete may like to download excerpts from the soundtrack or movie. Since the video is likely to be a long time coming, this is probably the best source.

RED DWARF

http://www.hal.com/ ~markg/docs/RedDwarf/ rd-home_page.html

Episode guide, FAQs, favourite quotes, images and sounds from the excellent British sci-fi situation comedy. Hopefully the favourite quotes will develop into full scripts.

STAR TREK GENERATIONS

http://generations.viacom.

Previews, news, peeks behind the scenes and merchandising from Paramount Pictures' new Star Trek film, this site claims to bring the final frontier to the cyber frontier. In this latest instalment of our favourite space soapie, through some astrological illogicality, Captain Picard (Patrick Stewart) comes face to face with Captain TJ Hooker (William Shatner).

STAR WARS MULTIMEDIA

http://bantha.pc.cc.cmu.edu:1138

Strictly for diehard buffs of the film and not the fabled defence project.

THE PICTURE PALACE

http://www.tagsys.com/ Ads/PicPal/

There are only weird, daring and truly offbeat films featured on this online video store. Each film has a short review and some have images and sound samples. There's some really choice stuff, grouped into Exploitation, RIP, Japanimation, From Hong Kong, Horror and Film Noir. While the store says it was set up to make hard-to-get videos available, and while it invites email, it doesn't actually mention money or shipping.

THE PRISONER HOME PAGE

http://itdsrvl.ul.ie/pub/ webac/Entertainment/ Prisoner/the-prisoner.html

This lean fan page of cult TV series *The Prisoner*, features episode listings and an interview with the actor/playwright Patrick McGoohan, who rejected the role of James Bond only to slip into obscurity.

THE SIMPSONS

http://turtle.ncsa.uiuc.edu/ alan/simpsons.html

Listen to Homer drool "Two all-beef patties, special sauce..." and the like. The stills and animations are as good as you would expect and the sound files have a certain cutesiness which many fans will enjoy.



THE POSTCARD STORE

http://postcards.www.media.mit.edu/Postcards/

This is a novel way to send a groovy e-postcard. You pick a card you like, write your message, and send it off, but instead of mailing the actual postcard, the server emails a pin number which is then used to collect the card from the site's pick-up window. It will be held here for three weeks after it's sent and then two weeks once it's been claimed. You can choose works by heavyweight artists such as da Vinci and Van Gogh; or you can go for more modern painters like Gaugin or Kandinsky; and there's a great choice of black and white photographs of New York. A really sweet site.

TV NATION

http://www.teleport.com/ ~xwinds/TVNation.html

Episode listings, poll results and transcripts of the historic TV Nation day bill passed in the US Congress – from this brilliant cutting-edge current affairs satire.

TWIN PEAKS

http://pogo.wright.edu/ TwinPeaks/TPHome.html

If you can't get enough of the decade's TV highlight *Twin Peaks*, perhaps this site will help you through the hours leading up to the local release of Lynch's subsequent productions.

All the Log Lady introductions, cast lists, pictures, theories, hidden allusions, FAQs, scripts and other Twin Peak links are available.

YOUR DAVID LYNCH RESOURCE

http://web.city.ac.uk/~cb157/ Dave.html

There's not as much here, as you might expect, given the surrealist auteur's huge and

deserved cult following. The discussion areas are a bit lean, but the full scripts of *Dune* and *Fire Walk With Me*, and the interview with Ray Wise (father and killer of Laura Palmer), should satisfy fans.

Finance

CURRENCY CONVERTER

http://www.ora.com/ cgi-bin/ora/currency

This nifty program makes currency conversion a doddle no matter what form you have it in. By clicking on one of nearly 60 currencies you can create a new list, with your selection as the basis. Rates are updated weekly.

DOWVISION

http://dowvision.wais.net/

Dowvision is a press-clipping service from Dow Jones and WAIS, and it includes the full text of the Wall Street Journal, Dow Jones News, Japan Economic Newswire, Canada Newswire, Business Wire, PR Newswire, Investext

Abstracts and Professional Investor Report.

MARKETMIND

http://www.marketmind.com

Subscription financial data and analysis service featuring MarketMind's own black box trading software. These systems generally look at stochastics, moving averages, convergences, divergences and pattern breaks to signal a market opportunity. The crash of 1987 was blamed on similar systems, although in less extreme situations they can limit losses and take advantage of trends. Caveat Emptor!

PAWWS: WALL STREET ON THE INTERNET

http://pawws.secapl.com/

Why pay for North American stock quotes when you can get them free at this online porfolio manager? You can make your own technical prophesies, based on its quarter-hourly updated index charts, or try your hand at fund building in the portfolio challenge. The more chewy stuff is in the subscription service, which offers online brokerage, portfolio management, real-time quotes, research and all the other services you would expect from a stockbroker.

QUOTECOM

http://www.quote.com

Like other financial data services, you need to pay to access live stock data here. UK data is available along with the most popular US and International prices. There is a rudimentary charting package but nothing to satisfy fans of Gann, Candlestick or Elliot theory. As there's plenty of dialup competition in this market, look around before you pay. Don't buy too much historical data, though, as this is free by FTP or if you go out and befriend other chartists.

THE MINING CHANNEL

http://www.wimsey.com/ Magnet/mc/index28.html

There's only a small amount of mining investment information, comprising newsletters, advertisements and a few company reports, available here. No one could argue that this isn't a great site, if only there was a bit more of it.

Food and Drink

CARNIVORES UNITE

http://bronze.ucs.indiana.edu/ ~jkonrath/recipies.html

Here's a selection of politicallyunsound recipes, using found objects and local pets.

CHILE-HEADS

http://chile.ucdmc.ucdavis.edu:8000/www/chile.html

Dip into Chilean recipes, chemistry, botanical facts, gardening tips and some general blurb. You can find out what's the hottest pepper, what makes it hot, how your body reacts, and identify that mystery one in your kebab.

CHOCOLATE LOVERS

http://www.ios.com/~shag/ chocolate.html

This page features links to, and short comments about, providers of chocolate and all things chocolatey on the Internet. You'll be surprised at how many there are, but at this stage they're all US-based. Not to worry – most will deliver internationally...if you can wait that long.

COUNTRY FARE RESTAURANT

http://www.service.com/cf/ home.html

Visiting Palo Aito? No? Well, at least you can whet your appetite by browsing through the menu at the Country Fare restaurant, in the most connected town in the world. Billing itself as an 'oasis among trendy establishments', this eatery offers sample recipes for downloading and cookery books for sale. You can also register to receive mailings about menu changes. The Whimsical Salt and Pepper Shakers must be a big crowd puller.

FLAPJACKS

http://www.ems.dmu.ac.uk/ ~se4sm/flapjack/

British flapjacks tasted, rated and slated.

LE CORDON BLEU

http://sunsite.unc.edu/expo/ restaurant/restaurant.html

The daily menu here is from the



BUNDYLAND

http://www.eia.brad.ac.uk/mwc

A visit to Bundyland is a must for fans of the cult TV show *Married With Children*. Providing everything from video (MPEG), sound (.wav and .AU) and short samples from the show, to a huge number of photographs, most of which still seem to be of Kelly (Christina Applegate), the family's delectable daughter.

internationally famous Parisian cookery school, Le Cordon Bleu. There are seven menus on offer, all with full recipes taken from the book, Le Cordon Bleu at Home. You can also find out more about classes in Paris, London and Tokyo.

LONDON PUBS REVIEWED

http://www.cs.ucl.ac.uk/misc/ uk/london/pubs/index.html

You can even add your local local to the list.

OVER THE COFFEE

http://www.infonet.net:80/ showcase/coffee/

There's enough coffee information, trivia and purchasing details on this site to keep even the worst caffeine addict happy. There are references to reviews, anecdotes, links to similarly minded sites, Usenet newsgroups and much more. An ideal companion for a brew up.

PIZZANET

http://www.pizza.hut.com

This pioneering service is becoming as famous as the Internet itself, even though it can only deliver in California. However, the server is way over in Kansas so there's no reason why this electronic storefront should not come to a Pizza Hut near you. If it turns out to be profitable, that is.

SHY MONGREL

http://jumbo.pipex.net/ intervid/esp/

This is part of the far-too-cleverfor-its-own-good advertising campaign by Grolsch but does it work? Have you or anyone you know switched to Grosch?

SPENCER'S BEER

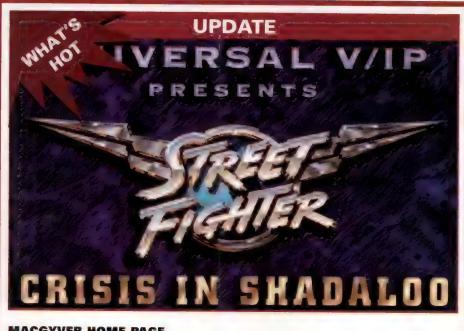
http://guraldi.itn.med.umich. edu/Beer/

Here you'll find a number of online home-brew recipe books, including the entire Cat's Meow series. Bottle-spotters will be thrilled to find there are 228 labels displayed in 128 colours.

TANGO SPONSORS THE WORD

http://tango.hhcl.com/

Warning! Another Demon site, with heavy graphics to boot, so make a coffee while you wait for



MACGYVER HOME PAGE

http://falcon.cc.ukans.edu/~mlkel/macgyver/macfaq_intro.html

If you've ever watched MacGyver, you'll know that there is one thing which distinguishes him from other action heroes – his ingenious solutions to the impossible predicaments he gets himself into. There are all the production details, FAQs, episode guides and biographies you would expect here, but it's the list of MacGyverisms in each episode which obsessive fans will really be after.

each page to download. If you watch The Word you may have seen this address flashed across the screen during the Tango advertisements. It's no suprise that this site is pointedly tasteless and sometimes humourous and there are pictures and clips from The Word, all couched in that Viz magazine top tips-type understated irony. But does it sell the product?

TASTY INSECT RECIPES

http://www.public.iastate. edu/~entomology/ InsectsAsFood.html

Such delights as Bug Blox, Banana Worm Bread, Rootworm Beetle Dip and Chocolate Chirpie Chip Cookies (with crickets). Yum!

VIRGINIA DINER

http://www.infl.net/vadiner/ vadiner.html

History, menus and peanut recipes from the Virginia Diner in the 'peanut capital of the world'. There is also have a rather impressive selection of foodstuffs, especially peanut products, which can be delivered within days, to anywhere in the world.

VIRTUAL PUB

http://lager.geo.brown.edu: 8080/virtual-pub

A pack of drunks getting dewyeyed over lager - just like wine boffs only with more elbow waving than beard stroking,

WINE NET

http://desires.com/wine/ index.html

Wineries and wine-orientated forums and clubs can be found through this US-based wine page.

Games

ALL-WEB EASTER EGG

http://orac.andrew.cmu. edu:5823/egg

The competition to find 50 Easter eggs hidden on Web pages is over, but most of the eggs are still there. Details here.

DOOM WWW

http://www.ping.de/~sven/ doom/

Billed as the best place to make new enemies, this site acts as a

dating service to meet fellow Doom addicts, so you can hunt them down and kill them via your modem. If you don't fancy killing fellow players, you can join forces and fight together.

DOOMGATE

http://www.cedar.buffalo.edu/ ~kapis-p/doom/DOOM.html

This paradise for Doomsters has links to FTP sites, hacking and editing instructions, add-ons, patches, spoilers, FAQs, secrets, forums and Doom II details.

FRACTAL EXPLORER

http://www.vis.colostate.edu/ ~user1209/fractals/ mandel.html

A fractal is a complex selfsimilar and chaotic mathematical object which reveals more detail as you get closer. Explore the most famous example of these, the Mandelbrot set, by changing the colour palette and zooming in with a click and generate wild graphics for yourself, too.

I-CHING

http://cad.ucla.edu:8001/ iching

If you're not happy with your fortune as told by this

interpretation of the Chinese I-Ching, you can always reload and get another one.

LITE-BRIGHT

http://www.galcit.caltech.edu/ ~ta/lb/lb.html

This is fun. You insert coloured pegs into a board, one colour at a time, to create a pretty picture. After you've finished, you can title it and then submit it to the gallery for others to admire.

MR POTATO HEAD

http://www.acsu.buffalo.edu/ cgi-bin/potato

Create your own, customised Mr Potato Head.

NATHAN COCHRANE'S HOME PAGE

http://www.iinet.com.au/ ~nathan/index.html

An original source page of game reviews and pre-release information.

PLAY BATTLESHIPS

http://manor.vork.ac.uk/ htdocs/bships.html

A one-way game of battleships against the computer. There is a way to cheat - see if you can work it out.

SEGA

http://www.segaoa.com

News, special events. promotions, new releases, hints, product descriptions, screen shots, audio/video clips and support for Sega computer games

THE CHESS SERVER

http://www.willamette.edu /~tjones/chessmain.html

This experimental server allows two people to play chess over the Web. Multiple games can be played simultaneously and any number can watch. It has a realistic graphical interface which will make a pleasant change for those who have played on bulletin boards.

THE FASCIST GAME

http://wombat.doc.ic.ac.uk/ fascist/fascist.html

You'll take ages to figure out this strange email game. It's not that it has no rules. On the contrary, the object is to make them up. If they are accepted, your score



http://tvnet.com/TVnet.html

Here's an idea for a quiet drinking game. Going round the table in turns, name a US TV show. If it doesn't have a home page here, down one shot of tequila. Expect to leave sober. This one has the lot, along with so many TV-themed interactive resources and things to explore that you'll be lucky to have any time for the neon bucket itself.

changes in a way you won't be able to understand, until you've spent some considerable time here. Confused? That's the general idea.

THE GAMES DOMAIN

http://wel-rs.bham. ac.uk/GamesDomain

There are absolutely oodles of game pages, FTP sites and gamezines on offer here. This is the largest and possibly the speediest server of its type and, yes, of course Doom is here.

URL ROULETTE

http://kuhttp.cc.ukans.edu/ cwis/organizations/kucia/ uroulette.html

You'll stumble across gems you'd otherwise never discover with this random navigator.

YOU ARE PEEPING TOM

http://133.38.149.19:80/ =@=:maki.ke.ics. saitama-u.ac.jp/

This Peeping Tom camera excites with glimpses of the back of some Japanese computer boff's head. Or maybe it's an airconditioning duct. Wow, let's set it to music.

Government

CCTA GOVERNMENT INFORMATION

http://www.open.gov.uk/

This prototype offers relatively sketchy information but invites feedback about UK Government operations. There are also links to the DTI and the National Rivers Authority.

CIA FACTBOOK ON INTELLIGENCE

http://www.ic.gov/facttell/ toc.html

There is lots and lots of info on the CIA here. You can find out about its role in international affairs, the intelligence cycle, its history and real estate. But that's not what you're after is it? You've seen it on TV and in the movies and you want to know about political assassinations, arms deals, Latin American drug trades, spy satellites, conspiracy theories, phone tapping, government-sponspored alien sex cults and the X files. You must have the wrong CIA.

DEPARTMENT OF HEALTH

http://www.os.dhhs.gov/

The US Department of Health

server contains useful information on finding your way through the US health service, plus public access information on topics such as cancer and Aids.

ENERGY INFORMATION

http://apollo.osti.gov/html/ eia/eiahome.html

Somewhere among the hoards of waffle on this US government energy administrator, you might find some indication of the future of fuel resources.

FEDWORLD

http://www.fedworld.gov

The US government set up this Test Web server - a graphicsintensive home page that can take a long time to load. It can take a while to get access, but when you do, you'll find yourself linked to a growing database of information from one of the world's largest bureaucracies.

HER MAJESTY'S TREASURY

http://www.

hm-treasury.gov.uk

Press releases, ministerial speeches, minutes and economic forecasts - you can subscribe to a mailing list to receive news and even read the budget. It has to be said that this is rather dull, but at least it shows the government is waking up to the existence of the 'information superhighway'.

I'M-EUROPE

http://www.echo.lu/

This home page, an initiative from the Director-General XIII of the EC, provides the WWW with information about Europe and the European electronic information market. There is some riveting reading here, including the much sought after unexpurgated version of the Maastricht Treaty.

JAPANESE PRIME MINISTER

http://www.kantei.go.jp

This server is located in the Prime Minister's official residence in Tokyo, but the service itself is experimental rather than official. About all you get from this inscrutable site is some general information about Japan. Unlikely to become one of Today's Cool Places.

US CENSUS BUREAU

http://www.census.gov/

There are more statistics here about the US and its citizens than you'll ever want to know. You can search the main census database, read press releases, view the poster gallery, check the projected population clock, listen to clips from their radio broadcasts or link to other serious info-head sites from their hotlist.

US DEPT OF STATE

http://dosfan.lib.uic.edu/dosfan.html

Take a photographic tour, browse the organisational chart or go straight to the Department of State Foreign Affairs Gopher for information on US treaties, global affairs and general foreign policies.

US FEDERAL GOVERNMENT SERVERS

http://www.fie.com/www/ us_gov.htm

Extensive listing and contents of US federal government servers.

Health

DENTAL NET

http://www.dentalnet.com/dentalnet/

An online dentist complete with assurances that it won't hurt.

GUIDE TO WOMEN'S HEALTH

http://asa.ugl.lib.umich.edu/ chdocs/womenhealth/ womens_health.html

Abundant pointers relating to women's emotional, physical and sexual health, this site covers a wide range of topics such as partner violence, shyness, bulimia, dating, contraception and piles.

MEDICAL ILLUSTRATORS

http://siesta.packet. net/med_illustrator/ Welcome.html

Shopping for raw, fleshy graphics? Look no further. This site acts as an Internet hub for medical illustrators to showcase their craft.

ONLINE ALLERGY CENTER

http://www.sig.net/~allergy/ welcome.html

Online advice, news and diagnosis for allergy sufferers.

THE DRUG PAGE

http://cyborganic.com/drugz/

Links to information, ezines, FAQs and experiences relating to drugs of all sorts.

THE VISIBLE HUMAN PROJECT

http://www.nlm.nih.gov/ extramural_research.dir/ visible_human.html

This project generated a lot of publicity, not just for itself but for the Internet's use as a visual teaching aid. What really caused the stir, and what isn't mentioned here, is that the pictures are of the thinly sliced frozen body of an executed serial killer. The image database contains 1,878 CT scans, obtained by sectioning the body into 1mm thick fillets and capturing a digital colour image at every level. This is intended

to be used for teaching applications such as identifying anatomical structures on the cross-sections and visualising the motion of the human form using supercomputer modelling. It's gruesome, but all in the name of science.

WORLD HEALTH ORGANISATION

http://www.who.ch/ Welcome.html

As well as press releases, newsletters, programmes and international travel and health advice, this site contains contact directories from the World Health Organisation in Geneva. It's not a bad source of other health links, either.

Internet Resources

A BEGINNERS GUIDE TO HTML

http://www.ncsa.uiuc.edu/demoweb/html-primer.html

A very long primer on HTML and an excellent one at that. It doesn't just explain the code, it gives style hints, troubleshooting advice and provisions for avoiding errors.

ABOUT THE INTERNET

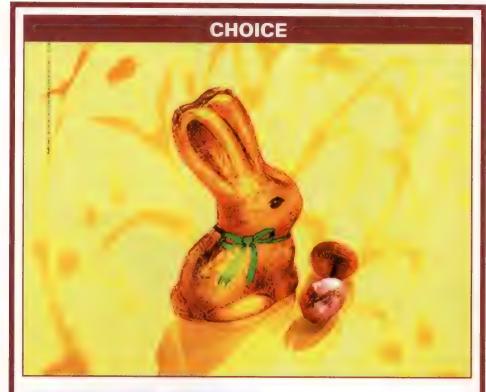
http://www.internic.net/ infoguide.html

A good starting page if you wish to delve into the history of the Internet or just generally learn how it's set up and who runs it. This is for the 'up and running' traveller and is not a 'how to' guide (there are plenty of those already). There are pointers to Internet organisations, the InterNIC Directory and Database services, information on the Internet culture, 'netiquette', 'Internet personalities' and Net archives, including the Internet monthly reports.

BEST OF THE WEB AWARDS

http://wings.buffalo. edu/contest

This site contains a list of the world's finest Web sites, as declared at the May 1994 International WWW Conference in Geneva. It's divided into different categories, like best commercial site, best entertainment site, best navigational aid, best



CHOCOLATE LOVER'S PLAYGROUND

http://www.godiva.com/

This page is so good you could eat it, with its mouth-watering chocolate recipes and meanderings into chocoholism. What's worse, after it has tormented your tastebuds and left your tummy causing seismological disturbances, you go to order, only to find they don't deliver outside the US.

document design, best use of interaction. Make up your own mind.

BLACKLIST OF INTERNET ADVERTISERS

http://math-www. unipaderborn.de/~axel/ blacklist.html

Find out how to deal with electronic junk mail and pesky advertisers buzzing your favourite newsgroups. There's also a list of crafty Net abusers, which aims to discourage you from joining their ranks.

CERN

http://www.cern.ch

Cern, the European Laboratory for Particle Physics in Geneva, is the definitive source of information about the World Wide Web, which was intially developed by Tim Berners-Lee to aid collaboration in physics research, but has since seen far wider acceptance. This server contains a wealth of vital Web information, including the extensive WWW Virtual Library (see Libraries).

DATA INTERCHANGE STANDARDS

http://www.disa.org/

This site is designed to disseminate information about electronic data interchange and its effect on business and Net commerce.

FOR YOUR INFORMATION

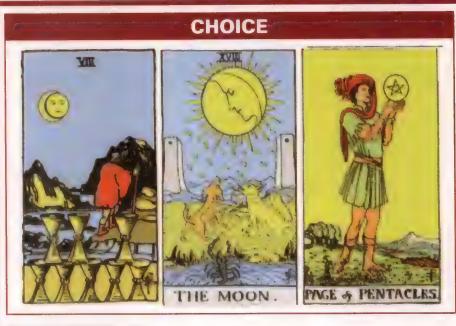
FTP: ftp.nic.nnsc.nsf. net/fyi/fyi_04.txt

I've just got on the Internet – what can I do? What's a Gopher? What's the World Wide Web? How do I find someone's email address? This file sets out to answer the questions commonly asked by new Internet users and deals at length with the Internet's evolution, explaining how technical and policy issues are decided. All should be clear and accessible, even to a newbie.

GRAPHICS FOR YOUR PAGES

http://www.rfhsm. ac.uk:70/0/people/gifs/ index.html

Useful paragraph dividers, icons, arrows, buttons and dingbats for Web page design. Rather than



TAROT INFORMATION

http://cad.ucla.edu/repository/useful/tarot.html

You can choose from a short three-card reading – the cards really are different each time you log on – or the full Keltic Tarot one. There are a couple of detailed FAQs which tell you pretty much everything you might need to know about this mystic art, and if you get really interested you may want to join the alt.tarot newsgroup. Even if you think this kind of thing is a load of baloney it can still leave you feeling quite unsettled.

copying the picture file directly into your HTML directory, you refer to each image's unique URL.

HITCHHIKERS GUIDE TO THE NET

FTP: nic.merit.edu/ documents/rfc/rfc1118.txt

This sounds as though it's going to be quite hip, but in fact it's a fairly worthy 24-page treatise on the origins and operation of the Internet. For the uninitiated, it goes some way to explaining what it's all about, but it's all rather dry and technical. There are a few hints on how to be a good Internet neighbour but really it's one for the Net historians only.

INTERNET COMPUTER INDEX

http://ici.proper.com

The limited information, divided into PC, Mac and Unix categories, on this site means beginners might find it useful as a launch point for mailing list information and online publications. However, its search index for reviews in PC Magazine, only returns issue and page numbers. You might be better off reading a couple of printed monthlies.

INTERNET UNDERGROUND

http://www.engin.umich.edu/ ~jgotts/underground.html

This site, while disclaiming illegal encouragements, compiles detailed information on phone tampering, encryption, hacking and the hacker subculture. Even if you have no intention of trying out any of these schemes, it can provide you with an illuminating insight into the mindset of hackers and a better understanding of communication networks.

PUBLISHING ON THE WEB

http://www.webcom.com/html/

This guide to preparing your own pages isn't bad, especially if you are compelled to do it all from first principles. It goes into great detail explaining the code, its uses and its limitations. Fortunately there are an increasing number of compilers, forms and software extensions becoming available, which can automate a lot of the hard work.

THE INTERNIC

http://www.internic.net

InterNIC provides information on

Internet access, use and network connection. This service is provided by heavyweights AT&T, General Atomics and Network Solutions and it's a very useful starting-out point for beginners.

YOUR OWN DOMAIN

http://www.wired.com/Staff/ justin/dox/domains.html

Find out how to look up and register your own domain name, using both official and subversive means.

ZEN AND THE ART OF INTERNET

FTP: ftp.csn.net/pub/net/zen

A free ASCII or Postscript version of this book is here via FTP – find out more about the Internet, including topics such as TCP/IP and domains.

Internet Search Tools

CITYSCAPE'S USERS

http://www.cityscape.co.uk/ users/wwwdir.html

Cityscape's free Web pages offer

What's or

has produced this mixed basket of the mildly commercial to the indulgently personal.

CUI INDEX

http://cui_www.unige.ch/ w3catalog

An excellent textual browser maintained by the Centre Universitaire d'Informatique in Geneva which allows you to search summaries of several Web catalogues to produce detailed links. The catalogue currently contains 12,308 entries.

FREE STUFF FROM THE INTERNET

http://power.globalnews. com:80/freestuff/ buyaccess.html

How to get the sort of stuff listed at Yahoo or WWW.emap.co.uk without paying someone to tell you where it is. It's amazing how alluring that word 'free' is. A rip-off of the highest order.

HARVEST

http://harvest.cs. colorado.edu/

Another excellent WWW keyword browse and search tool with less duplication than others such as Lycos and the WWWW. The reference database is collated from content summaries, anchors and HTML strings and contains over 22,000 WWW home pages. Make sure this is in your toolkit.

HOMEPAGE PUBLISHER

http://www-bprc.mps. ohio-state.edu/HomePage/

Here's a chance for you to try your hand at page publishing. This service lets you create your own page using a forms-based HTML editor. Pictures can be imported by reference to another URL but best of all it's free. What more could you ask for?

INFOSEEK

http://infoseek.com

Infoseek allows you to search a database of WWW pages, the most recent six weeks' Usenet, Newsbytes International Computing Industry News, Cinema Reviews, FrameMaker 4.0 Help Notes, Hoover's Masterlist of US Companies, Wire Services, Computer Select, InfoWorld and Hoover's Company Profiles. Unlike much

of the competition it is always accessible, can search through the entire body text of Web pages and Usenet, has an ultra-forgiving interface and can give you a report on all the news postings from a single email address instantaneously. You can try it for a month free, but after that it costs about \$10 per month. Step aside, Lycos!

LYCOS DATABASE

http://fuzine.mt.cs.cmu.edu/

This massive index maintained by Carnegie Mellon University is the best place to start a Web search. This Web crawler generated index searches, document titles, headings, links and keywords, usually returning more hits than any other tool. Whether they will be useful ones is another matter, though.

NETIZENS

http://gnn.com/ cgibin/imagemap/ HOME?62,341

Create a link to your own home page or browse this GNN list by name and choose one randomly - it's a bit of a lucky dip.

NEWSGROUPS IN OXFORD

http://www.lib.ox.ac.uk/ internet/news/

This automatically compiled list works like a Gopher menu and allows you to browse news FAQs accompanied by brief descriptions. However, you'll need to configure your WWW client to point at a suitable NNTP server to take advantage of the hyperlinks.

SUBJECT-ORIENTATED CLEARINGHOUSE

http://www.lib.umich.edu/ chhome.html

This guide provides links to subject-orientated Internet resources by providing a menu from which to start your search. It's like a stiffer, less attractive, version of Yahoo but just as useful.

THE REVOLVING DOOR

http://www.galcit.caltech.edu/~ta/cgi-bin/revdoor-ta

You can add your favourite URL, delete a URL or visit one already on the menu. This makes it an ever-changing and quasidemocratic hot list maintained entirely by visitors.

TODAY'S COOL SITE

http://www.infi.net/cool.html

If your site is listed here it will guarantee a traffic surge of at least a few thousand.

UK INTERNET LISTS

http://www.tardis. ed.ac.uk/~paola/inetuk/

This is the best set of UK Internet resource lists you will find anywhere on the WWW. If you're shopping for a connection, you can compare Internet access providers' details here and then click on a link which takes you straight to their home pages. There are lists of Internet consultants, training courses, publications and a hotlist chock full of links to useful information, guides, tools and services.

VERONICA

Gopher: gopher.scs.unr.edu

Veronica (Very Easy Rodent-Oriented Netwide Index to Computerised Archives) is a utility which allows you to carry out keyword searches of Gopher menus.

WHO'S WHO ON THE INTERNET

http://web.city.ac.uk/citylive/ pages.html

Not what you'd think, but the WWW Virtual Library's directory of individual home pages. Add your own, using the form, if you think you'll be heard above the general noise.

WORLD WIDE WEB SERVERS

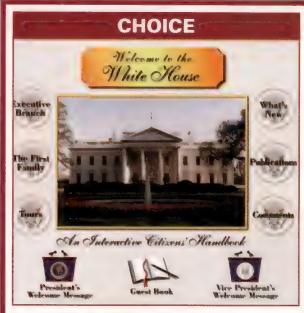
http://info.cern.ch/ hypertext/DataSources/ WWW/Servers.html

You have the choice of sensitive map or hypertext link to search for servers in this regionally sorted list. It's great for finding country-specific information or just surfing the globe.

WORLD WIDE WEB WANDERER

http://www.mit.edu:8001/ afs/sipb/user/mkgray/ht/ web-growth.html

Apart from cryptically coded statistics on Web growth, this site provides links to 1,265 http sites, sorted by country.



WELCOME TO THE WHITEHOUSE

http://www.whitehouse.gov

Have you ever used Bill Clinton as an extreme example of the type of person who uses the Internet? Well, here's proof. It's easy to be cynical about this PR exercise, particularly the moribund guided tour of the Whitehouse and Hillary's page, but it does show the doors of democracy to be at least ajar. Most government departments can be accessed from a simple menu. Larrikins may even download Bill's welcome message for their windows start-up sound file. Best though, is the invitation to email the President and 'speak out', perhaps about his wife's page.

However, other than the site code, no other information is supplied, so it's a bit like throwing a dart, but it's useful if you're after regional data.

WORLD WIDE YELLOW PAGES

http://www.yellow.com/

Yes, yes, yes. This is what we've been waiting for – a centralised business registry. It means you only have one place to look, rather than scouring every corner of the Net. It ambitiously sets out to be the 'Yellow pages for the next 100 years'. It's looking good so far, let's hope it can handle the traffic.

WWW VIRTUAL LIBRARY

http://info.cern.ch/hypertext/ DataSources/bySubject/ Overview.html

The extensive WWW Virtual Library is a powerful search tool that allows you to find information on almost any of the world's Web servers through a series of user-friendly keyword searches. This is a vital address so add it to your hotlist pronto.

WWW WORM

http://www.cs.colorado.edu/ home/mcbryan/WWWW.html

Based at the University of Colorado, this server offers several good ways to search the Web with multiple references.

YAHOO

http://akebono.stanford.

This is another indispensible addition to your browsing toolbox. Apart from the excellent menu-based browser, there are links to new, cool and popular sites. Menus may be several layers deep and can hyperlink you to Web sites, Gophers, news and FTPs.

Internet Software

AMIGA MOSAIC

http://insti.physics.sunysb.edu/AMosaic/

The Commodore Amiga is one of the many machines able to

access the Internet. To download the latest version of the company's browser, simply click on the FTP archive link provided on this page. A complete preview of the browser, including embedded screenshots, is available if you wish to appraise it before download. You may join the Amiga Mosaic mailing list by sending mail to witbrock@cmu.edu

ARCHIE

http://web.doc.ic.ac.uk/ archieplexform.html/

Archie is a popular way to search anonymous FTP sites for specific files. Any WWW client can do a simple search, but for full searches you need formscompatible client software such as Mosaic 2.0 or MacWeb.

CELLO

http://www.law.cornell.edu/cello/cellotop.html

This is the home page for the Cello Internet Web browser for Windows. Cello is primarily a Web client, but also has built-in support for FTP, NNTP news, phone servers and Gopher. Optional utilities can be used to extend this to WAIS, Hytelnet, Telnet and Telnet 3270.

CU-SEEME

http://www.indstate.edu/ CU-SeeMe/index.html

CU-seeme has caused quite a stir around the Internet, because it offers public domain video conferencing for Macintosh and Windows. To broadcast video, you need a Video Spigot (Macintosh) or Windows multimedia-compliant video card (PC).

EINET

http://galaxy.einet.net/

Elnet's Web site not only houses the latest versions of its Macintosh and Windows Web clients (MacWeb/ WinWeb); it also contains a swag bag full of information on topics as diverse as architecture and current affairs.

LYNX

Telnet: millbrook.lib.rmit. edu.au (login: Lynx)

A virtual library maintained by the Royal Melbourne Institute of Technology in Australia, providing hypertext access to the Web using the Lynx browser. This features a textual rather than graphical interface, making it very like a Gopher menu, except with the click-on links expected from Mosaic.

NCSA

http://www.ncsa.uiuc.edu

This essential site is the home of Mosaic, the widely used Windows and Macintosh-based Web browser. It has the latest versions of most Mosaic-related tools including the GIF and JPEG viewers and multimedia players, along with documentation in varying degrees of complexity.

NETSCAPE

http://home.mcom.com/home/ welcome.html

This is the most complete set of Internet resources accessible from one site anywhere on the Web, making it a great default home page, and the warren of pointers to browsers, Gophers, virtual maps, catalogues and directories will probably have you lost underground for hours. Tutorials range from getting started through to designing your own pages. The formerly wonderful 'what's new' has moved to Yahoo but the 'what's cool' is still worth the visit.

SPRY

http://www.spry.com

Home of the first commercial version of Mosaic and Internet in a Box.

Legal

ADVERTISING LAW

http://www.webcom.com/ ~lewrose/home.html

Advertising law, at first sight seems very basic. If you're honest, you might think, you shouldn't have any problems. However, it is getting decidedly more tricky with hot issues such as privacy, semantics, product safety, testimonials, environmental issues, baiting and refunds. With the meteoric speed of the Internet's acceptance as an advertising medium, it's very hard for even the legal profession to keep up.

BENTHAM ARCHIVE OF BRITISH LAW

http://www-server.bcc.ac.uk/ ~uctlxih/Bentham.html

Access to University College,



THE VIRTUAL HOSPITAL

http://indy.radiology.uiowa.edu/VirtualHospital.html

The Virtual Hospital is a continuously updated medical multimedia database intended to provide patient care support and distance learning to practising physicians. There are links to many online health books, medical journals, newsletters, surgery simulations and multimedia textbooks and the virtual patients area has case studies accompanied by graphically illustrated surgical walkthroughs. This is a great resource for health professionals but will also be of great interest to all practising hypochondriacs – we know you're out there.

London's legal archives, plus pointers to other legal wells. There are also particular focuses on criminal and property law, Usenet threads and essential lawyer jokes. The criminal law area even has a section on general defences – how to get away with it, once you've been caught.

INTERNET USER DETAINED

http://raptor.sccs.swarthmore. edu/jahall/dox/freakout.html

This is a first-hand account of police surveillance of Internet postings. This user requested advice on suicide drugs and wound up in the lock-up for two days.

WEST'S LEGAL DIRECTORY

Gopher: 163.231.231.3

Profiles of more than 500,000 attorneys and law firms in the USA. If you want to make lawyer jokes, don't do it here please!

Libraries

BRITISH LIBRARY

Gopher: gopher.bl.uk

A Gopher-based pilot service which provides a marked contrast to what's on offer from the US Library of Congress, this service is dubbed Portico, includes information about how the library is organised, how to use it, and a notice board. It's also possible to search documents by key words. Given the library's years of experience in online information, one expects something more exciting.

CABOT SCIENCE LIBRARY

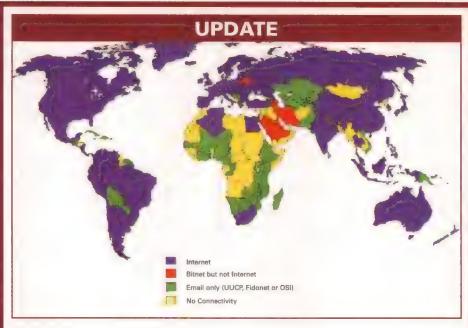
http://fas-www.harvard.edu: 80/libraries/cabot/cabot.html

This Harvard University
Library's new Internet presence
is an ideal place to start off any
scientific research. Apart from
information about the library's
catalogue and policies, there are
links to the Harvard Computing
Review, Elektra and other online
student publications, plus
external databases.

EDUCATIONAL TEXTS

Gopher:etext.archive.umich.edu

This archive contains hundreds of thousands of words, ranging



THE INTERNET SOCIETY

http://info.isoc.org

This organisation, which has both corporate and private members, co-ordinates the development of standards and codes of conduct for the Internet. At this site you'll find detailed information about its activities and an encyclopaedic collection of information about the history of the Internet's development. However, it's a little disappointing that the data sometimes seems a little out-of-date and pages should be refreshed more often to set a better example.

from the complete works of Shakespeare to the script of a lost episode of *Star Trek*. Only pornographic images are banned. Consequently, users are warned they may find some of the material offensive. Despite some fairly extensive trawling, the most offensive stuff seen so far was some truly appalling poetry. This site can also be accessed via FTP at the same address.

LIBRARY OF CONGRESS

http://lcweb.loc.gov/ homepage/lchp.html

An attractive colourful front-end which is slow to load but worth the wait. Apart from the US Government information and reference library sections you'd expect, there are electronic versions of recent exhibitions at the library – complete with photographs and illustrations. There are also pages of the Global Electronic Library currently under construction.

VATICAN LIBRARY

http://www.ncsa.uiuc.edu/ SDG/Experimental/vatican. exhibit/Vatican.exhibit.html

Visit several virtual 'rooms' in the Vatican, including a library, a music room and a nature room.

Museums

FIELD MUSEUM OF NATURAL HISTORY

http://www.bvis.uic.edu/ museum

This Chicago museum has placed a multimedia tour of its DNA to Dinosaurs exhibit. You can page through the eras, downloading movies and sound bites. There's also a display of Javanese masks and more to come. One to show the kids.

THE EXPLORATORIUM

http://www.exploratorium.edu

This is a great attempt to bring a museum online. There are practical details, plus attempts to bring to life some of the San Francisco Exploratorium's 650 interactive exhibits. To get the full effect of the Exploratorium pages, your system needs to support the JPEG picture compression standard.

Music

BEATLES

http://bazaar.com/Beatles/

This is another fun page from the house that brought you

Megadeth. It's not the usual clips, discography and tour dates-type service. Instead, you can send Beatles postcards, Telnet into a Beatle chat session, read about the new *Live at the BBC* release, hear various vocal samples, enter sweepstakes and indulge in a host of other Beatles trivia. As with the Megadeth server, it's well designed, looks great and you don't have to be a fan to enjoy the site.

BUZZCOCKS HOME PAGE

http://www.cityscape.co.uk/ users/ac46/indbuzz.htm

This attractively presented site features all album covers, most lyrics, and far too few track cuts. Although it's still under construction, it's getting plenty of attention. You can even send fan email to Pete.Shelley@cityscape.co.uk

CYBERSIGHT HOT URL MUSIC LIST

http://cybersight.com/cgi-bin/cs/nnnn/Music

This page allows you to hyperlink to a music page and then return and rate it with either a thumbs-up or a thumbs-down. There's about a hundred listed, including the Buzzcocks,

Bjork, Ministry, the Orb, Sisters of Mercy, Morrissey and many more.

DEAD CAN DANCE

http://www.nets.com/dcd

If you haven't been exposed to the hauntingly beautiful music of the UK gothic group Dead Can Dance, here's your chance. There is a 15-second cut from every song in the band's eight-album history, as well as the usual biographies and tour details.

ELVIS PRESLEY

http://tamsun.tamu.edu/ ~ahb2188/elvishom.html

Yes, Elvis is alive and living in cyberspace. This shrine, created by schoolgirl Andrea Berman to 'honour Elvis and his cultural and musical legacy', is a must for fans. Visitors can tour Graceland, starting outside those famous gates. Listen to sound clips from classics like Love Me Tender, Heartbreak Hotel and Hound Dog.

EMPTY TV

http://www.galcit.caltech.edu/~ta/mtv/main.html

A parody of Music Television (MTV) and Adam Curry's Metaverse (see below). It can, however, be hard to get on to.

HYPERREAL

http://hyperreal.com/

Techno/ambient/rave archives featuring reviews, lists, publications, drug discussions, tools and shareware, sound samples, DJ sets, FAQs and links to other sites.

INDUSTRIAL MUSIC

http://www.eecs.nwu.edu:80/ ~smishra/Industrial/

If you want to volunteer to take over or help with this site you'll be greeted with open arms. That's if you're into the likes of Einstürzende Neubauten, Negativland, Skinny Puppy, Cabaret Voltaire and Ministry.

IUMA

http://iuma.southern.com

It's a good idea to choose the dull textual mode wherever possible on this graphically intensive site. Indexing is not as efficient as it first appears and you will be lucky to find much that's familiar. What you will



GLOBAL NETWORK NAVIGATOR

http://www.gnn.com/gnn/gnn.html

Make this top Web server an essential addition to your hotlist. From deep in the heart of Californian wine country, GNN has carefully organised links to a host of useful places. This includes access to the inimitable Whole Internet Catalogue, a large classified directory of what's on the Web, Digital Drive In, a section about movies, and NetNews, a weekly roundup of Internet news. The Market Place, a growing source of commercial practices setting up on the Internet, What's New, and the excellent Personal Finance section are also well worth a regular scan.

discover is a treasury of audio clips by new talent. This site is the European mirror and should eventually develop a stronger local flavour.

JAPANESE INDEPENDENT MUSIC

http://www.atom.co.jp

The exploding, yet unfamiliar Asian pop scene may not be the next big thing, but it may just be the next big thing after that.

Keep watcing this spot.

JOHN PEEL'S PLAYLISTS

http://www.bbene.org.uk/ bbctv/radio1/JPeel_top.html

See them here two years before they chart in the UK and 15 years before Rolling Stone catches on.

KRAFTWERK INFOBAHR

http://www.cs.umu.se/tsdf/ kraftwerk

Demos, live out-takes, interviews, lyrics, and the complete discography of the German techno pioneers Kraftwerk can all be found at this location. There's also a selection of clones and other synthetic groups.

MEGADETH, ARIZONA

http://www.bazaar.com

Even if you're not a fan of heavy metal band Megadeth, this site is a fine example of superlative HTML design. What's really smart about these barbed wire-capped pages, and something every designer should note, is the bottom menu bar which travels with you and lets you know where you've been. There's plenty for fans, a terrific set of screensavers featuring Megadeth animations and sound bytes, Troma Films' pages (makers of such classics as The Toxic Avenger and Chopper Chicks From Zombie Town), horoscopes, Megadeth archives and merchandising. Prepare yourself.

METAVERSE

http://metaverse.com

A US music and entertainment service that acrimoniously grew out of MTV (MTV sued to get the exclusive use of the domain name mtv.com, the previous name for the Metaverse Service). There's a range of sections of information about concert tours, new releases, videos, and unsigned bands promoting themselves. This service has become more commercial recently, with reader

offers and shopping being added to the mix.

MOTOWN RECORDS

http://www.elmail.co.uk/ music/motown

You won't find the Manic Street Preachers' first single here at the home page of Detroit's Motown Records. What you will find are clips and news from a selection of new, former and faithful artists, all with that unique Mo'town soun'.

MUSIC RESOURCES ON THE INTERNET

http://www.music.indiana.edu/ misc/music_resources.html

You'll be overwhelmed by the quantity of music-related sites featured here. They're split into academic, non-academic, user-maintained, geographically local sites and artist-specific sites. These are further split into WWW, Gopher, Telnet and FTP divisions.

MUSIC VIRTUAL LIBRARY

http://www.oulu.fi/music.html

This rich seam includes a comprehensive catalogue to all kinds of music information on the Internet, a Midi home page, an online version of the All Music Guidebook, and homes pages for artists, from Tori Amos to Frank Zappa.

MUSICBASE

http://www.elmail.co.uk/

This database features news on the UK music scene and showcases such talents as the Stone Roses, Human League, PWEI, Terrorvision, Blur, Eternal, Positiva and Kickin' Records. It's expanding rapidly and should develop into a great site.

MUSICLINK

http://tito.hyperlink.com/mm/

MusicLink offes a UK-based, site-building service to bands and music companies looking to publish on the Internet. The Orb and Penguin Cafe Orchestra are early starters.

NETTWERK PRODUCTIONS

http://www.wimsey.com/ nettwerk/

Home to such progressive fringe artists as Single Gun Theory,

Severed Heads, MC 900 ft Jesus, Sarah Mclachlan, Consolidated and the Falling Joys. Not all artists have the own page yet, but watch this site as Nettwerk often finds a sound several years before the mainstream.

NW2NOISE

http://www.maires.co.uk:80/ nw2n/

Great noise orientated independent showings from the likes of Bumgravy, Headbutt, Free Kitten, Guv'ner and Huggy Bear.

PLANET STARCHILD

http://www.mcs.com/~bliss/ starchild/home.html

A surprisingly business-like board covering the entire constellation of indie music. Some of the featured artists offer downloadable self-running promo kits for you to sample.

RA HOME PAGE

http://www.southern.com/RA/

Ra calls itself an authorised ezine of ezines. It's trying to attract as many artists, bands and labels as possible in the ambient/experimental/trance/ techno world and bring them together as individual sites. All sorts of new and eclectic stuff is likely to emerge in the near future.

REM

http://www.halcyon.com/rem/

If you think REM are dull, this collection of FAQs, lyrics, guitar chords, photos, articles and links to other archives is unlikely to change your mind. File next to Renee and Renato and REO Speedwagon.

ROLLING STONES

http://www.stones.com

Set up to promote the Stones' recent Voodoo Lounge album and tour, this features tour dates, text and video interviews with the Stones. This was the site of the autumn 1994 live Internet concert broadcast which, although not a critical success, was a brave and pioneering foray into what may one day be mainstream. The video clips are a great idea, but in the time it takes to deliver the Quicktime movies down even a fast modem connection you could form your own R&B band.

STEREOLAB

http://www.maths.monash. edu.au/people/rjh/stereolab

Discography, samples, news, interviews, reviews, pictures, T-shirts and tour dates from the UK's finest 'groop to play space-age batchelor music'.

SUB POP RECORDS

http://www.subpop.com

Mail order and archives from the cheery Seattle home of the sadly defunct Nirvana, Mudhoney and their ilk.

SURF THE INTERNET **MUSIC RESOURCES**

http://www.ozonline.com.au/ TotalNode/AIMC/Surf.html

This is a huge collection of less mainstream international music links and a separate section of Australian Independent pages. The excellent Ausmusic page features previews of emerging talent and radio schedules of off-beat stations.

VIVARIN LYRICS SERVER

http://vivarin.pc.cc.cmu.edu/ lyrics.html

Read song lyrics from just about every pop group ever, from A-Ha to 999. The range will amaze and astound you.

YELLO ON THE NET

http://yello.Space.NET/yello

This is not just another music site: you can feel the presence of the eccentric Dieter Meier and Boris Blank lurking in the background. There's a full discography, and while you can't yet download any songs, you can transfer a few of the raw samples from which Yello created their latest single, and a segment of their recent Zebra video, to your computer.

Nature

ARBORICUTLTURAL STUFF

http://www.sccs.swarthmore. edu/~justin/Docs/arbor.html

A set of guidelines for correct tree pruning.

BRITISH TREES

http://www.u-net.com/ trees/home.htm

A guide to native British trees referenced by common or Latin names. There is plenty of information but no pictures.

COW HOME PAGE

http://netvet.wustl.edu/ On:\cows.htm | /

A rich collection of pointers to bovine resources all over the Web, including futures spreads, dairy software, animal evaluation, body condition algorithms and health papers.

COWS CAUGHT IN THE WEB

http://www.brandonu.ca/ ~ennsnr/Cows/Welcome.html

A curious attempt to find humour in the holiest of all beasts.

ENTOPLATH

http://www.msstate.edu/ Entomology/ENTPLP.html

This server at Mississippi State University features news, course



WWW ROBOTS, WANDERERS AND SPIDERS

http://web.nexor.co.uk/users/mak/doc/robots/robots.html

WWW Robots, Wanderers and Spiders are programs that traverse the Web automatically, collating references and links in order to build browsing libraries. This page details many, explains their uses, their limitations and the damage they can do. There's advice about what to do when your server is overloaded by a Robot, a standard for Robot exclusion and guidelines for designing your own.

outlines and publications on entomology and plant pathology. It provides links to newsgroups, newsletters, similar servers and the Mississippi Entomological Museum.

HOUSSEN'S DOG'S WORLD

http://www.houssennet.nb. ca/DogWorld.htm

Buy the training video or download the free textbook. Either way, Rover will soon know who's boss.

NETVET VETERINARY RESOURCES

http://netvet.wustl.edu/

Links to veterinary resources such as the Electronic Zoo, NetVet Gopher server, NetVet WWW server and the Veterinary Medicine page of the WWW Virtual Library.

THE ELECTRONIC ZOO

Gopher: netvet.wustl.edu:70/ 11n%3A/e-zoo

A Gopher list of resources related to all fauna. As with all gopher menus, it may lead you all over cyberspace before you find what you're looking for and despite the name it's not a virtual zoo with animations and soundbites. However, if one arrives you'll probably be able to find it here.

THE ENVIROWER

http://envirolink.org

Very impressive at first sight, the EnviroWeb claims to be the largest online environmental information service on the planet. All sections boast the prefix 'enviro'; there's an EnviroFreenet, an EnviroForum, an EnviroNews service and so on. Some of these areas are still under construction but there's a mass of information already there. This is an essential spot if environmentalists.

THE ROYAL BOTANIC GARDENS, KEW

http://www.rbgkew.org.uk/

This server forms part of the RBG Kew's mission to ensure better environmental management by increasing botanical understanding. There's not a lot here yet, other than information on poisonous plants, links to similar servers and details of mailing lists, but no doubt development is an organic process.



THE NATURAL HISTORY MUSEUM

http://www.nhm.ac.uk/

The Natural History Museum is the first major UK museum to enter the Internet age. At this site you can find out more about the museum's activities, events and timetables and there are even a few pictures. Of course it can't be a substitute for a visit, but a peek behind the scenes is nonetheless of interest. There are also links to other sources about the earth and life sciences plus the Walter Rothschild Zoological Museum.

THE VIRTUAL GARDEN

http://www.timeinc.com/vg/ Welcome/welcome.html

These splendid horticultural resources are being constructed by Time Life, which intends the site to be the most comprehensive guide to gardening online. It's already that and it's still under construction. There are links to plant society magazines, special interest newsletters and gardening monthlies, all with interactive capabilities for editorial feedback and shopping. Parts of the new series The Complete Gardener are on show, including a searchable database which will recommend plants which are suited to your soil, zone, climate.

News

CLARINET NEWS

http://www.clarinet.com/

Clarinet is a high quality subscription news service providing newsgroup access to such big guns as Reuters, Associated Press and Newsbytes. A single user subscription costs about \$40 per month, or cheaper if shared across a site.

CNN NEWS

gopher: info.umd.edu:925/11/

These up-to-the-minute news snippets are little more than headlines from CNN's stories of the day.

FREE INTERNET NEWS SOURCES

http://www.helsinki.fi/ ~lsaarine/news.html

This guide from the University of Helsinki in Finland offers a veritable smorgasbord of free lunches courtesy of the Internet's news providers. We love that word free, used throughout this huge comprehensive list, but ultimately you'll need to pay to receive the quality, quantity and currency you've come to expect from other media.

GAZETTA ONLINE

http://info.fuw.edu.pl/gw/0/gazeta.html

An experimental edition of Poland's biggest daily.

IGC HEADLINE NEWS

gopher: gopher.igc.apc.org/11/
headlines

Ecologically aware news Gopher

service from the Institute for Global Communications. Stories cover issues such as nuclear testing, refugees, corruption, racism, government policy changes and Third World crises.

NEW YORK TIMESFAX

http://nytimesfax.com

The New York Timesfax is an eight-page, condensed version of the paper normally distributed by fax. This, the electronic edition, can be downloaded daily and viewed with Adobe Acrobat. Acrobat is also available here, free.

PILOT ONLINE

http://www.infi.net/pilot/ vpls.html

Not an aviation ezine but daily local news, weather and classifieds from the Virginian Pilot newspaper.

THE VOICE OF AMERICA

gopher: ftp.voa.gov/1

As far as free online news goes, this one from *The Voice of America* is quite good. You get daily feeds from stories broadcast on its international shortwave network, as well info about its other media activities.

TIME DAILY

http://www.timeinc.com/time/daily/time/latest.html

Daily news shorts from US Time, some with hypertext links to further information. These bulletins are concise but deliver the day's main international stories on one page.

UNITED NATIONS NEWS

http://nearnet.gnn.com/ gnn/meta/travel/res/ newsgath.html

This Gopher covers news of the United Nations' involvement in international affairs. The service is updated five times per week.

Politics

BLACK INFORMATION NETWORK

http://www.bin.com

This is the site of a non-profit organisation concerned with the African-American community.

FEMINIST ACTIVIST RESOURCES

http://www.clark.net/pub/ s-gray/feminist.html

This site has hundreds of links to forums, articles, political action groups, legal documents, news items, feminist fun and games, women's organisations, counselling services and other topics of interest to feminists.

FRIENDS OF THE EARTH

http://www.foe.co.uk/

You can find out about Friends of the Earth's latest campaign, your nearest group, results of environment studies or how to join forces. There's also plenty of links to other environmental resources and groups.

GREENPEACE INTERNATIONAL

http://www.greenpeace.org/

The home page of the head office of Greenpeace International, located in Amsterdam. This site has links to its environmental library in Canada, its Ozone Campaign, information on environmental treaties, a photobook, green Gophers and other environmentally aware resources.

NOAM CHOMSKY ARCHIVE

http://www.contrib.andrew. cmu.edu/usr/tp0x/ chomsky.html

Oodles of highly controversial articles on, interviews with, lectures by, quotes from and literary reviews of Noam Chomsky, Institute Professor of Linguistics at MIT and outspoken critic of US foreign policy. He can change the way you read the world.

PALESTINE INFORMATION

http://www.alquds.org/

This server promotes the Arabic culture and, in particular, the Palestinian situation. It provides its own Middle Eastern resources guide, with advice on mailing lists, news services and Internet resources, as well as links to many Arabic Gophers and Web pages.

REGENERATION MAGAZINE

http://www.poptel.org.uk/ Regeneration/

This is the British Labour Party's attempt to reach out to UK youths online. Find out about the political process, how to start your own militant wing, or how to use its feedback facility to get them onto your case.

SPUNK PRESS

http://www.cwi.nl/cwi/people/ Jack.Jansen/spunk/ Spunk_Home.html

This page from Spunk Press, an electronic publisher of anarchist literature, acts as an index to anarchist resources around the Web, including a mass of subversive writing. It may seem paradoxical to find anarchists so well organised, but most of the writing adds up to an attack on capitalism rather than organised government. Some pieces earnestly recommend schoolboy mischief like sugaring police car fuel tanks, torching billboards, having sex in government offices and defecating in mailboxes. With notable exceptions, such as the works of Chomsky, this a dated, deluded, and retrogressive compilation.

THE GALLUP ORGANIZATION

http://www.gallup.com/

About 20% of visitors to this site fill out the questionnaires and

opinion polls. Not a bad response compared to say, visitors to Barclays requesting credit card literature. Gallup promise to provide results of past surveys, which will keep you up to date with trends and ratings such as the fickle swings of Bill Clinton's popularity.

THE RIGHT SIDE OF THE WEB

http://www.clark.net/pub/ jeffd/index.html

This is a directory of places and resources on the Net likely to appeal to those with a 'conservative point of view'. There is a directory of unique information, including reams on Rush Limbaugh, the reactionary network radio host, as well as material found on other servers. This includes details of right-wing newsgroups, Whitewater updates, and a link to the Ronald Reagan home page, which attempts to 'set the record straight'. Unless you're an expert on US politics. you may it all too esoteric However, it's done with a sense of humour and is certainly interesting from a cultural perspective. Email to rightSide1@aol.com

US PEACE CORPS WEB

http://www.intac.com/ PubService/peace-corps/ peace-corps.html

This slow server is a privately funded service for past, present and potential peace corps volunteers. It provides history, joining details, country information, Usenet news links and social activities for returned volunteers. It's still a spartan service, but should grow.

Publishing

AMERICAN DEMOGRAPHICS

http://www.gems.com/ marketing/american_ demographics/index.html

A taste of the sort of marketing data and sociological analysis you can expect if you subscribe.

CASPER STAR TRIBUNE

http://www.trib.com

Unless you are interested in

NEW E

GEFFEN/DGC

http://www.geffen.com/

This halfway-house of yesteryear's grunge fad gives you a taste of such artists as Courtney Love's band, Hole. Unfortunately, neither the page nor the music is as fascinating as her antics, but there are also pages for fellow Geffen artists Nirvana, The Stone Roses, Sonic Youth and good old Peter Gabriel. There is also a convenient direct link to the record store CDNow so you pop straight in and order the discs.

Casper, Wyoming, this will be more interesting for its feeds from Time, VOA and CNN and its great travel and finance links.

CENTER FOR CIVIC NETWORKING

http://www.earthweb. com:8000

This US organisation helps community and non-profit groups exploit the Internet's potential for low-cost publishing.

CHINA NEWS DIGEST

http://www.cnd.org/

This site houses access to several Chinese language publications, scenic pictures, Chinese home pages and information pertaining to China and the Chinese international community.

CHRONICLE OF HIGHER EDUCATION

http://www.chronicle. merit.edu

A Web adaptation of the well known US academic weekly, which includes the employment listsings.

ELECTRONIC JOURNALS

http://info.cern.ch:80/ hypertext/DataSources/ bySubject/ Electronic_journals.html

A listing of magazines and periodicals available via the Internet, including links to either details or the full text of the publications. Those mentioned range from 3W, the UK-based global network newsletter, to the Electronic Green Journal and USA Today. The file is extensive but users are asked to send news of additional titles. There is also some useful info about using the Net.

ELECTRONIC NEWSSTAND

http://enews.com

One of last year's most highly publicised Internet businesses, the Electronic Newsstand was set up as a browsing medium for users who may want to buy subscriptions to magazines. After you've selected magazine, periodical or journal from the main menu, you'll be launched into Gopherspace which can often mean a fair bit of trial and

error to find anything interesting. Each publication has a mission statement, subscription offer, current issue details including contents, and at least one complete article plus archives.

FORTEAN TIMES

http://forteana.mic.dundee. ac.uk/ft

Fans of strange, unexplained and improbable phenomena will relish every entry in this taste of the UK magazine Fortean Times. Read about spontaneous combustion, alien sex-beasts, flying saucers, zombies, Uri Geller and surfing to the stars on warped space. Highlights of the last 20 years include bizarre photographs such as the 'magnetic man' and the 'kitten with wings'. You'll want more.

GUARDIAN ONLINE

http://www.gold.net/online/

Innovative UK national newspaper service supported by CityScape. Only Thursday's Online section and special arts features are available, at this stage. For access to the stories, there's a key word search engine that's baffling until you get to know it. This is a great way to get back-copy by subject or author without having to scan through reams of paper. Shame it tends to be so out of date.

INQUISITOR MAGAZINE

http://mosaic.echonyc.com/ ~xixax/Inquisitor/

This media-watch publication aims to take the hype out controversial media topics like gun control, AIDS...and semantics. You'll find a few samples and reviews here, but the goal is to get you to subscribe to the paper issue.

INTERNET AUSTRALASIA

http://www.interaus.net/ magazine/welcome.html

Australia's first Internet magazine has many of its articles generously bared online.

MULTIMEDIA NEWSTAND

http://mmnewsstand.com

Probably as good a place as any to lodge subscriptions to one of the hundred-odd magazines here, from *Cosmopolitan* and *Esquire* to *Cruising World*, or to email order videos. Very few magazines give a sneak preview, contents or any details other than pricing.

PALO ALTO WEEKLY

http://www.service.com/PAW/home.html

The on-line version of a free newspaper covering the much-documented Palo Alto area in California. Outsiders will find the format more interesting than the content.

PANIX

Gopher: gopher.panix.com

This is a New York-based public access Internet service where 'anything legal' goes. At present it's no Manhattan Cable, offering as it does a mild mixture of New York City and restaurant information together with some unusual specialist sections, such as the one containing technical and chemical information about photographic film, and the excellent MIT Guide to Lock Picking.

SKEPTICS SOCIETY

http://www.primenet.com/ ~lippard/skeptics-society.html

The Skeptics Society, the private organisation of the intellectually curious, investigates the pseudosciences, paranormal and claims of fringe groups. At this site, you can subscribe to the magazine, order books and tapes, read newsletters and find out what's new in the world of scientific enquiry.

TECHWEB

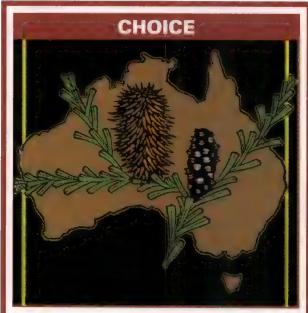
http://techweb.cmp.com/ techweb/default.html

It's a cramped messy looking home page but dig into the news search and you'll be astounded at how much technical and computing information is available. Apart from that you can browse through publications and even subscribe if you wish.

TELETIMES

http://www.wimsey.com/ teletimes.root/ teletimes_home_page.html

An ambitious free monthly from Vancouver, this invites (and needs) free contributions. In each themed issue, it has the odd interesting article, amongst more ordinary stuff. It's so well-presented, it is a pleasure to flick through, but as is often the case,



AUSTRALIAN BOTANICAL GARDENS

http://155.187.10.12/anbg/anbg.html

Australia's Botanical Gardens, which are located in the charming city of Canberra, has put an enormous wealth of information online about its projects, gardens, flora and fauna. There are tourist guides, flowering calendars, biodiversity studies, mission statements, bird and frog call sound files, fire procedures and much more. It's like stumbling into a government office and finding reams of magazines and papers strewn across the floor in unrelated piles – delve in and enjoy, though in this particular case, substance certainly beats style.

it is the potential that is most exciting.

WEB NEWSPAPER LIST

http://www.jou.ufl.edu/ commres/webjou.htm

This site has links to US educational and experimental publications. For example, the San Franciscan Gate is good, allowing key word searches on back issues. Italian, Russian and Dutch teletext also appears.

Radio

NHK RADIO JAPAN

http://www.ntt.jp:80/japan/ NHK/

Broadcasting schedules, timetables, propagation maps and info in 22 languages.

RADIO STATION WXYC

http://sunsite.unc.edu:80/ wxyc/

This is the site of the first real-

time radio station on the Internet. This page explains how to connect, what software you will need and gives broadcast details. You can pick up the software by FTP at this site. Reception quality is dependent on a number of factors, particularly the system demand. If the signal is bad, try later, preferably not in US peak hours. If you have a fast connection, you can listen to the music as background while you go about your other tasks, even surfing to other sites.

RADIOSPACE

http://www.radiospace.com/ welcome.html

This is a reasonable resource for finding news and information on the activities of radio stations on the Internet.

SHORTWAVE RADIO CATALOGUE

http://itre.uncecs.edu/radio/

The best organised of the many shortwave listener/amateur radio sites. You can query the database and find out what's on at a particular time, and where and when you can pick up a county's broadcasts. There are logs, station ID clips, maps, news, satellite information, propagation, sunspot activity, spy stations and all sorts of data, including updates on experimental Internet

Real Estate

WINDERMERE REAL ESTATE

http://windermere.com

Search for properties for sale in Washington, Oregon, Idaho and British Columbia or put your own on the market. There's also advice on how to beat the taxman, when to sell and various other tidbits to help you move your block.

WORLD REAL ESTATE LISTING SERVICE

http://interchange.idc.uvic.ca/ wrels/index.html

A free service for buying and selling real estate in North America and Europe.

Reference

ARTFL PROJECT

http://tuna.uchicago.edu/ ARTFL.html

This extraordinary exercise in extreme francophilia provides various French language and literary databases and utilities.

COMPUTING

http://wombat.doc.ic.ac.uk/

In theory you can search here for a definition of any computing term or acronym. However, the language evolves all too often.

HOW TO SAY ORNERY

http://xmission.com/~jonyag/ ornery.html

Indispensable pronunciation guide with audio coaching.

HUMAN LANGUAGES

http://www.willamette.edu/ ~tjones/Language-Page.html

An astoundingly rich digest of



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Total Connectivity Providers Ltd PO Box 454, Southampton SO16 3WR Tel: (01703) 393392 Email: sales@tcp.co.uk links to linguistic resources such as dictionaries, thesauruses, poetry, publications and more in just about any language you can name, including Australian Aboriginal dialects, Esperanto, Hebrew, Manx Gaelic, Welsh and Vietnamese.

JEFFREY'S JAPANESE/ENGLISH DICTIONARY GATEWAY

http://www.cs.cmu.edu:8001/cgi-bin/j-e

There are plenty of options available in this English/Japanese dictionary, allowing you to search for translations of words and expressions either way. You can view text in English and Japanese characters. There are links provided to download browsers which support Japanese text, or you can download them as graphics. It will take a while to get started, but plenty of help is provided.

RASTA/PATOIS DICTIONARY

http://www.willamette.edu/ ~tjones/languages/ rasta-lang.html

Rasta/Patois-to-English translations.

THE DEVIL'S DICTIONARY

http://www.vestnett.no/cgi-bin/devil

No, it's not an occult reference, but a list of cynical definitions begun as a satirical weekly newspaper in 1881. Many terms would have been offensive in their day but have now lost their venom. On the other hand, some would get you shot today, but were harmless then.

WEBSTERS

http://c.gp.cs.cmu.edu:5103/ prog/webster

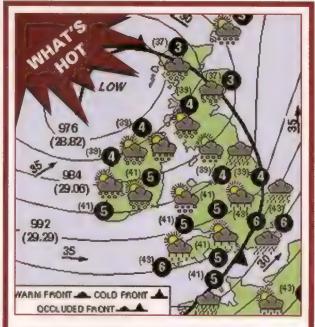
Stuck for a definition of a word? Well, here's an online version of the famous dictionary. Key in the word and the definition will be promptly returned – but you need to know how to spell it.

Religion

ABOUT WITCHCRAFT

http://www.crc.ricoh.com/ ~rowanf/COG/iabout.html

Definitions, basic philosophy,



THE ELECTRONIC DAILY TELEGRAPH

http://www.telegraph.co.uk

To access this great free service, you'll first need to register for a pin number. Once in, the information available makes an acceptable alternative to print, but even with the new faster connection it's still slower to flick through. The graphics at this site are beautiful, if you have the patience to wait for them.

FAQs, general practices, holidays and other information from the Covenant of the Goddess (people who call themselves witches).

ANGLICANS ONLINE!

http://infomatch.com/ ~haibeck/anglican.html

This page from the Anglican Church of Canada shows more concern for the modern relevance of Christianity than reinforcing the scriptures unchallenged. As such, you can follow concerns raised by Anglican youths and the responses of the clergy. There is debate about homosexuality and the role of women in church affairs, plus links to related resources such as the Pope's view of the role of computers in the church, Biblical contradictions and religious resources from all sorts of denominations.

CATHOLIC RESOURCES

http://www.cs.cmu.edu:8001/ Web/People/spok/catholic.html

Scripture, liturgy, early writings, Vatican documents, papal encyclicals, pronouncements, books, links and other resources of interest to Catholics – and other people, too.

CONFESSION BOOTH

http://anther.learning.cs.cmu.edu/priest.html

No, that's not on the menu, but I'm sure they'll add it soon. As penance, eat a cold bucket of chips and then teach your parents how to debug machine code with Lou Reed's Metal Machine Music at full volume in the background.

GLOBAL JEWISH NETWORKING

http://www.huji.ac.il/ WWW_JEWISHN/www/ t01.html

Links to Jewish resources such as libraries, museums, conferences, FAQs, Usenet newsgroups, student groups, reading lists and Hebrew sofware support.

HOMOSEXUALS AND THE CHURCH

http://vector.casti.com/QRD/religion/

Pointers to documents about to the church's view of sexuality.

ISLAMIC RESOURCES

http://latif.com/

Gopher links to Islamic

resources such as the Cyber Muslim guide, FAQs, guides to Islam, announcements, conferences and social events, Qu'ran teachings and news from the Arab world.

LUBAVITCH JEWS

Gopher: lubavitch.chabad.org

This is a Gopher site for information regarding Lubavitch Jews. Readings from the Torah, customs for barmitzvahs and articles on Lubavitch activism make this a good site for textual information on many aspects of Lubavitch life. There is even a guide to Jewish holidays.

NETWORK FOR JEWISH YOUTH

http://www.ort.org/anjy/anjy.htm

This network links up to the offices of the All Jewish Youth organisation in order to provide Jewish and Israeli educational resources.

RELIGIOUS AND MULTIFAITH SITES

http://www.crc.ricoh.com/ ~rowanf/religion.html

This page points to many religious pages, Gophers, resources and FAQs. These also include many pagan, magical and occult sources.

SNAKE OIL

http://fender.onramp.net/ ~analyst/snake/Snakeoil.html

A less than reverent guide to 'Kooky Kontemporary Kristian Kulture'.

THE BHAGVAD GITA

http://www.cc.gatech.edu/gvu/people/Phd/Rakesh. Mullick/gita/gita.html

Here you can view PostScript Sanskrit pages of the Bhagvad Gita, the most sacred of vedic literature. However if your Sanskrit is not up to scratch you may find the English summary and translation easier going.

THE BIBLE GATEWAY

http://www.calvin.edu/ cgi-bin/bible

This lets you search the Bible as a database by textual references or by passage. You can also use it to turn scripture into hyperlinks in your own documents by referring to the gateway in your HTML code.

Science

BEHAVIOUR ANALYSIS HOME PAGE

http://www.coedu.usf.edu/ behavior/behavior.html

This page was produced by the University of South Florida and it supplies links to journals, mailing lists, FTP sites and academic addresses which are concerned with behaviour analysis and psychological studies. It's still under construction, though.

CHICAGO UNIVERSITY PHILOSOPHY

http://csmaclab-www.uchicago. edu/philosophyProject/ philos.html

This is a forum set up to mediate the scholarly discussion of philosophical various works. You can join in and voice your own opinions on such vital subjects as Nelson Goodman's theory of metaphor, the language of thought hypothesis, counterfactuals and Kripke. It's all fairly basic really and you should be able to bluff your way through with no trouble.

CICA PROJECTS

http://www.cica.indiana.edu/ projects/index.html

These are details, images and results (in some cases) of projects undertaken at the Centre for Innovative Computer Applications. It's not limited to any particular scientific strain and there are experiments in linguistics, feminism, biology, geometry, fluid flow, geology, 3D, basketball, kinesiology and more. If you have an enquiring scientific mind, you'll surely find something fascinating here.

EARTHVIEW

http://www.ldeo.columbia.edu/ EV/EarthViewHome.html

Find out where it's quaking in the USA or link to other seismological stations around the world.

JET PROPULSION LAB

http://www.jpl.nasa.gov/

If you are a budding astronaut with an interest in space travel you can get access to NASA press releases, flight information and pictures from this NASA maintained Web server. News stories may be obtained as they break by finger to nasanews@space.mit.edu

JOINT INSTITUTE OF NUCLEAR REASEARCH

http://www.jinr.dubna.su/

Interested in nuclear research proposals and progress? If so, maybe you can make sense out of this joint venture by Communist and former Communist states.

KNOWN NUCLEAR EXPLOSIONS

Gopher: wealaka. okgeosurveyl.gov/

Technical details, coordinates, results and other information compehensively recording the use and testing of nuclear devices. There's also access to earthquake catalogues and other seismological data.

MARINE GEOLOGY AND GEOPHYSICS

http://www.ngdc.noaa.gov/ mgg/aboutmgg/wdcamgg.html

This site houses the World Data

Centre for Marine Geology and Geophysics and is maintained by several US departments with very long names. It's primarily responsible for all types of data from the seafloor, including both in-situ measurements such as seafloor cores, and remotely sensed data such as marine magnetics, gravity, seismic reflection/refraction and bathymetry. This includes fully searchable inventories, slide sets, posters, relief data and CD-Roms for download or ordering. MGG personnel are available to answer questions by email.

MYERS-BRIGGS TEST

http://sunsite.unc.edu/jembin/mb.pl

This eerily accurate personality test will confirm just what a beast you really are.

NASA

http://www.nasa.gov/

This is the top level of NASA's mighty presence on the Web. You can get to all of its projects and databases via the virtual map of the USA plus statements on its policies, missions and discoveries at this site. Check out the Kennedy Space Center for the latest on the Shuttle or go to the headquarters in DC to find out its employee's foreign travel allowance loadings for an insight into both ends of the space glamour spectrum.

NATIONAL SCIENCE FOUNDATION

Gopher: nic.merit. edu:70 /1/.nsf-info

Historical statistics of traffic traversing the NSF Net, which are easily loadable into spreadsheet format.

PI

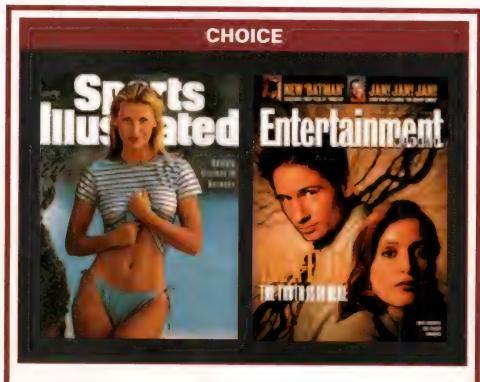
http://cad.ucla.edu/ repository/useful/PI.txt

If you've ever wondered what Pi calculated to a zillion to the gillionth digits is, here's the answer.

ROBOTIC TELE-EXCAVATION

http://www.usc.edu/dept/raiders

Before you can climb into the cockpit of this interactive excavation robot, you'll need to pass a short quiz and, occasionally queue. Once aboard, you have full control



PATHFINDER

http://www.timeinc.com

The richest of all publishing pages, this has not only useful links but real free products on display. Entertainment Weekly, Time Magazine, Time Daily, Warner Books, The Complete Garden Encyclopedia, Money Watch and Vibe, to name but a few, are all here, not to mention the OJ Files which...well I expect you can guess. This a handsome site, with no hard sell, just goodwill and it makes a pleasant change from direct mail tactics. and can zoom around a site littered with unknown objects. By aligning the camera and air blasting the terrain, you get to uncover things...

ROYAL OBSERVATORY, EDINBURGH

http://www.roe.ac.uk/

The main attraction for the layperson here is the superb collection of photographs from telescopes around the world. Detailed pictures of constellations and nebulae, usually the preserve of academics, are made publicly available. Some save you time by providing thumb nail previews before loading the full high resolution image. The home page claims it gets over 5,000 visits each week from over 30 countries. This superbly designed site should please professional and amateur astronomers alike.

SIAMESE FIGHTING FISH PROJECT

http://www.cica.indiana.edu/ projects/Biology/index.html

In this project, animated videos of Siamese fighting fish were shown on a monitor next to a fish tank to test the behaviour of the real fish. You can download the images and animated movies, but at this stage results are not available.

SOUTH POLE

http://www.deakin.edu.au/ edu/MSEE/GENII/NSPT/ NSPThomePage.html

This includes the bi-weekly newsletter of the Amundsen-Scott South Pole Station in the Antarctic.

SPACE CALENDAR

http://newproducts.jpl.nasa. gov/calendar/calendar.html

A guide to upcoming anniversaries, rocket launches, meteor showers, eclipses, asteroid and planet viewings, occultations and other space happenings in the intergalactic calendar. Many of the entries have links to pictures, pages and further information.

SPACE ENVIRONMENT LABORATORY

http://www.sel.bldrdoc.gov

If you are lucky enough to have been involved in long distance wireless communication or aviation, then



INTV SINGAPORE

http://www.ntu.ac.sg/intv/intv_www.html

If you're running Windows you can register to receive a free Teletext viewer to run in conjunction with Netscape at this site. Other users can choose the slower Dynamic conversion service, which is just like ye olde Teletext – slow, undetailed and full of spelling mistakes – but it's live, free and once you've sorted out which page you want, it can deliver the facts straight to your desktop.

you are probably aware of the effects of solar activity. Otherwise, you may be baffled by the significance of the research which is collected together on these pages. The Space Environment Agency provides current space weather, sunspot levels, solar images, research information and a brief explanation of its purpose that won't leave you too much wiser.

SPACE SYSTEMS LABORATORY

http://ssl.umd.edu

A brief overview of studies into the applications of telerobotics in space, carried out at the University of Maryland. Better still, use the link to NASA to get a more coherent and comprehensive presentation of the scope of these projects.

STARS AND GALAXIES

http://www.eia.brad.ac.uk/btl/

This comprehensive multimedia guide has been taken from the CD-Rom Earth and Universe and provides audio, images and movies with an aim to demonstrating how stars behave, how their energy is generated and a clue about their origin and life cycle.

THE GEOMETRY CENTRE

http://www.geom.umn.edu/ welcome.html

Located at the University of Minnesota, the Geometry Centre aims to develop, support and promote computational tools for visualising geometric structures in order to stimulate communication between mathematicians and the general public. There are forums. geometric software, pictures, workshops and other resources for advanced and novice mathematicians. This is also the focus site for experiments with WebOOGL, the format for distributing and linking 3D and higher objects across the Web.

THE MAGELLAN MISSION TO VENUS

http://newproducts.jpl.nasa.gov/magellan/

Here you'll find news releases and historical footage taken from the first planetary spacecraft launched from a space shuttle. There are enough images, animations and technical documents on Venus and the project itself to satisfy even the most ardent astrophile. However, don't bother if you're looking for evidence of extraterrestrial life forms.

Apparently those photos are kept in a secret vault called the X files. The mission recently concluded with the craft resting in pieces on the surface of Venus.

THE SOLSTICE HOME PAGE

http://solstice.crest.org

This site lists Internet resources for those interested in alternative energy and sustainable IT. It includes discussions of such issues as non-motorised vehicles in Asia and a tour of photo-voltaic installations in Switzerland. Perhaps this is not the most dynamically designed site, but it's full of information. It can also be accessed by Gopher at gopher.crest.org or anonymous FTP at solstice.crest.org

WEB-ELEMENTS

http://www.cchem.berkeley. edu/Table/index.htm

An interactive periodic table allows you to click on an element and find out more about its properties. There is a link to a fairly useless element percentage calculator and an entirely useless isotope pattern calculator but the site as a whole does have some novelty value.

What's or

Shopping

BURLINGTON COAT FACTORY

http://www.coat.com

Here we have an experimental service run by a US 'outerwear' retailer. "This is a work in progress and is subject to changes in focus" warns the home page. The service offers store location information, access to an illustrated catalogue of the merchandise and invites feedback.

CATALOG CENTRAL

http://catalog.florida.com

This publicity centre provides tourist information on Florida, as well as showcasing more than a dozen catalogues, which you can order online or by phone. However, the 'but wait, there's more'-style build-up is so familiar it's discouraging.

CDNOW! THE INTERNET MUSIC STORE

http://cdnow.com/

CDnowl is no half-hearted cybermall. It's an efficiently structured music megastore catering to a diverse range of tastes such as rap, exercise, march, new age, gay, holiday and rock. You can browse the associated track listings, biographies, reviews, press clippings and stories online or even buy the video and T-shirt. It takes international orders, which could work out even cheaper than buying locally.

COMPUTER EXPRESS

http://cexpress.com:2700/

This is an excellent directory of computer-related products from over 600 suppliers. You can size up the competition and vendors even agree to match any outside offer. This all adds up to a model for the future of marketing. To join, you must fax your credit card and delivery details in return for a membership number. At present, ISN won't deliver outside the US but it was recently taken over by the TV Home Shopping Channel, so watch out for synergies developing soon.

DOWNTOWN ANYWHERE

http://www.awa.com

A place where you can 'browse,

learn, share and trade' or, more obtusely, it's a 'virtual salon for the marketplace of ideas'. This location's best selling point is its shopping opportunities. You can buy a range of books and equipment, or how about a WWW T-shirt, just \$13.95 from the Downtown Anywhere Souvenir Shop? If you decide to buy, you can pay by credit card or open a DA account so you can't overspend your limit. It takes time to find your way around any new place but exploring the streets of DA is both fun and worthwhile.

ECCOSYS' E-SHOP PAGE

http://www.eccosys.com/ E-SHOP/index.html

Asia's first ecash online shopping mall. At this stage, it's all experimental and the shops are bare. Keep watching.

EURODOLLAR

http://www.eurodollar.co.uk

At the present time, the only Web service available here is a rental office branch list and a EuroDollar charge card form, but the company has big plans for developing its Net connections and promises to become a model example of a good commercial application.

GIFTS FOR DOG LOVERS

http://www.onramp.net/ imagemaker

Forget the Doc Martin
Megastore, this is shopping
1995! From the cute to the
obsessively bizarre, email-order
dog-embossed paraphernalia,
including boxer shorts and
lampshades. No breed too is
obscure to feature here.

GLASS WINGS

http://www.aus.xanadu.com/ GlassWings/welcome.html

A trial virtual shopping mall – it's sparse but shows promise. Polyester Records offers a large indie selection by email and you can order popcorn in flavours like Black Cherry and Honey Onion Mustard from Myers Popcorn. However, the site is primarily a showcase for Lee Perkins' games reviews.

INNOVATIONS

http://www.innovations.co.uk/giftpoint/

The UK Innovations catalogue

specialises in unusual and innovative gadgets, probably designed more to sell than to use. They're not cheap, but then maybe not having to scour the streets for a clever present makes up for that.

INTERNET MEDIA GROUP

http://www.mailorder.com/

The Internet Media Group specialises in strategic Internet-based direct marketing solutions. It seems to be doing all the right things, like registering a much-coveted domain name and securing multiple high speed T1 and T3 routes to the Internet backbone. Shops on show include Sunday Comics, Paper Direct and Sonnai Frock's erotic prints.

INTERNET PRESENCE AND PUBLISHING

http://www.ip.net

A zany collection of online shopping services. You have to wend your way through a fair bit of claptrap to get anywhere interesting – they're going to learn not to do this soon. This is Herbal Care meets Macintosh

software Meets Beavis and Butthead. All the outlets have forms, but so far this is more a shop window than a shop.

LINUX IT CATALOGUE

http://www.fintronic.com/ linux/catalog.html

This catalogue of low-cost Unix workstations contains a detailed products and options list, as well as advice on how to choose the system that best meets your needs and references to Linux's trade press coverage. The latest catalogue is available via finger at linux-sales@fintronic.com

MICRO MEDIA

http://www.micromedia.co.uk/

This neatly organised UK-based shopping mall offers speedy access to an Australian/UK employment service, computer dealers, financial services, retailers and various services.

MULTIMEDIA INK DESIGNS

http://mmink.cts.com/mmink/ mm.html

Multimedia Ink Designs' home

UPDATE

MONITOR RADIO

http://town.hall.org/radio/Monitor/index.html

Welcome to the home page of the Christian Science Monitor, which many regard as the USA's most unbiased news, reporting and cultural analysis service. The usual programme schedules, feed times and background information is available, as well as past highlights, which are stored in audio file format. The big news is that a 24-hour Internet audio multicast channel is planned for the near future, so keep an ear to the ground.

page offers access to a series of small businesses selling goods from 'socially responsible' coffee to earrings. This virtual equivalent of the trendy Lakeshore Arcade appears to cater exclusively to US customers.

NETSURFER MARKETPLACE

http://www.netsurf.com/nsm/ latest.mktplace.html

A new commercial online shopping mall with a wide variety of products on show.
Results from its on-going reader survey are supplied, as well as advertising rates and style guides. There's not a lot here yet, but it's high quality, straightforward and diverse.

ONLINE YACHT BROKERAGE

http://beta.aladdin.co.uk/cpy/

You can scan through the list of yachts on offer, find something in your price range and then access a staggeringly detailed description complete with pictures of the craft. When you've narrowed it down to two or three you can email or phone

to arrange a viewing. Theoretically, they can arrange delivery anywhere in the world.

OPEN MARKET

http://www.openmarket.com/

Sign up for your complimentary demo dollars to see how it's going to be done in the future. If you're searching for a particular product, an excellent commercial site searcher tells you where in the Web to go.

ROCKY MOUNTAIN CYBER MALL

http://www.hardiman.com/ malls/rmcm/IndMerch/ index.html

While there's a fair selection of produce on display, at reasonable and sometimes wholesale prices, the way this mall is presented makes it difficult to have much confidence in its integrity.

TAG ONLINE MALL

http://www.tagsys.com:80/index.html

This simple and friendly, commercial online shopping

mall seems to be attracting new clients every day. It doesn't use any innovative ordering forms or fancy security procedures but it does put you in touch with vendors in the same way traditional media would.

THE NETMARKET COMPANY

http://www.netmarket.com

Unlike some of the brash and pushy shopping centres on the Internet, NetMarket has the 'shy-sell' feel of a charity Christmas gifts brochure. It prides itself on high quality at reasonable prices. Shops include Noteworthy Music (CDs), 800-The Rose (florist), Les Vignerons (wine), The Space Between (books on UFOs, lost worlds, secret societies etc) and Sovereign Records. You can buy online, however international P&P may cancel the bargain value. This was the first company on the Internet to support automatic public key encryption for credit card transactions.

THUNDERBIRD

http://www.cybermalls.com/ cywharf/thunder/index.htm

Surely one of the Internet's prime powerboat shops.

UK INTERNET FLORIST

http://mkn.co.uk

Florists are becoming quite popular on the Web. This one's the first in the UK. You enter your credit card number, apology and delivery details into the provided form, whoosh them along the Internet and you're back in the good books before you get home.

USED SOFTWARE EXCHANGE

http://www.hyperion.com/ usx/index.html

This international used software fleamarket is presently a free service. The database has several thoughtful filters enabling you to specify the software type, price, currency or platform. When you find something you want you can contact the vendor by email to arrange the trade.

VIRTUAL ADVERTISING

http://www.shore.net:/~adfx/top.html

At first glance, this anarchic-

looking shambles of a home page may mislead you into thinking you've taken a detour on the way to the shops. However, although it's not signposted, there's a surprisingly large and interesting group underneath of advertisers peddling their wares. It's hard to believe it's a commercial service.

Sport

ABDOMINAL TRAINING

http://www.uq.oz.au/ab.html

Get 'abs like ravioli' – an excellent analysis of stomach shaping from that seat of learning Queensland University.

ALADDIN SAILING INDEX

http://www.aladdin.co. uk:80/sihe/

There are links here to a number of sailing pages, such as the Royal Yachting Association, Royal Ocean Racing Club, Royal Southampton Yacht Club, US Coast Guard, plus racing news. There are also plenty of individual home pages, product launches and Challenge promotions such as the Americas Cup.

AMERICA'S CUP

http://www.ac95.org:80//

This is an excellent source of race results, competitors' details, scores, commentaries and live coverage of the proceedings of the 1995 America's Cup, the world's richest sporting event. There's even a live cam to monitor the conditions in San Diego Bay.

AUSTRALIAN CRICKET

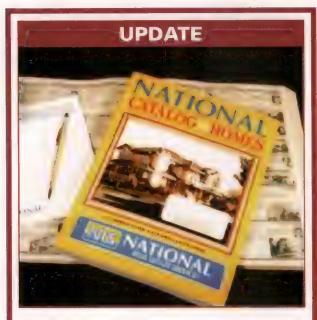
http://www.physics.su.oz.au/ ~mar/cricket.html

If you despair at the domination of American sports on the Internet, here is a wealth of pointers to cricket Gophers and information pages.

GOLF DATA ONLINE

http://www.gdol.com/

This service, at US\$9.95 per month, supplies a database of golf information on over 14,000 golf courses in North America, including golf course maps and golf photos. There's pro golf schedules, golf tips, golf



ESTATE AGENT

http://www.gems.com/realestate/index.html

Fancy moving to the new South Africa? That spare 4,250,000 Rand will come in handy to purchase a rather bijou little thatched cottage that's on offer there. Unlike their honest and straightforward counterparts in the UK, these realtors are unconstrained in their prose. Unfortunately, only three of the nine bedrooms in this property are en suite and only two of the four garages have automatic doors, so this property couldn't exactly be called luxurious and you might want to look elsewhere. Anyway, it doesn't rain enough there, either.

publications, golf merchandise, golf real estate, golf travel, golf weather, golf, golf and more golf.

INTERNET SQUASH PLAYERS ASSOCIATION

http://www.ncl.ac.uk/~npb

International squash information includes rules, clubs, rankings, equipment, results, match reports, coaching, publications and a whole lot more.

LIVERPOOL FC

http://www.rpi.edu/~sathes/ lfc.html

This site is a good example of one of the growing UK football club Web services – all of which seem to the work out of the UK's top educational establishments. The Liverpool pages include fixture lists, up-to-date match reports, honours histories, team and manager photographs... plus a collection of notable quotes from, as the Web service puts it, 'Scousers and non-Scousers' alike.

SKI WEB

http://www.sierra.net/SkiWeb

A regionally arranged international guide for skiers and once you've chosen your destination, what's on offer will differ but will usually include satellite photos, snow reports, accommodation and coming events. Many North American, Australian and New Zealand runs are covered but Europe, at this stage, is only represented by Slovenia and Slovakia.

SOCCER PAGES

http://www.atm.ch.cam.ac.uk/ sports/webs.html

This is a collection of links to football pages. You'll be able to make your way to most of the English and many European, US, Brazilian and Japanese clubs. There are also connections to tables, fixtures, results and all sorts of fanatical football chatter.

SPORT VIRTUAL LIBRARY

http://www.atm.ch.cam.ac.uk/ sports/sports.html

This is probably the most extensive set of links to sports information on the Internet. If you can play it, it's on here. Sports covered include American football, baseball.



KLINGON LANGUAGE INSTITUTE

http://www.kli.org/klihome.html

This earnest server is dedicated to the promotion and study of the Klingon language – as spoken by the Star Trek Enterprise's former rivals. It's a crude language, without the pleasantries of English... a little like French! Even sophisticated urbane trekkers, the quality and sophistication of the hypertext-driven, Klingon-to-English audio translator, combined with the po-faced seriousness of the exercise, will dumbfound you.

rugby (union and league), soccer, cricket, tennis, cycling, rowing, orienteering, windsurfing, skiing, rock climbing, scuba diving, car rallying and white water rafting.

THE 1998 WINTER OLYMPICS

http://www.linc.or.jp/Nagano/

The next Winter Games, at Nagano in Japan, are still three years away, but armed with your trusty Internet connection you'll be the first on your block with news on the events, venues, transport and Snowlets, the official mascots.

THE FEMALE BODYBUILDER PAGE

http://www.ama.caltech.edu/ ~mrm/body.html

Plenty of proud pictures of the female form pushed to nearillogical extremes, as well as competition results, videos, fan mail addresses, workout advice and links to individual bodybuilder's pages.

WEIGHTLIFTING

http://www.cs.odu.edu/~ksw/weights.html

Links to fitness newsgroups, weightlifting FAQs, competitive

lifting rules, workout advice and pictures of men displaying their physiques.

Support

CHILD ADOPTION

http://www.gems.com:80/ adoption/

This service provides a database with photgraphs and descriptions of children from all over the world who are seeking adoption. You'll have to make your own mind up whether or not this is exploitation but it is certainly disturbing.

MISSING KIDS DATABASE

http://www.gems.com/kids/ nemec.html

This site is an indispensible resource in the search for missing children but the interface seriously limits its usefulness. To find if a child is reported as missing you must first search by region and then scan through the names. To retrieve a picture of this child, you need to click on each name separately. This is fine if you have the real name, not an alias, but if you only have a face it's a laborious process. The list

encouragingly includes children who have been found.

POW/MIA DATABASE

http://lcweb2.loc.gov/pow/powhome.htm

This database will assist research into the US Government documents pertaining to US Military personnel killed, missing or imprisoned in South East Asia around the time of the Vietnam conflict. There is also a similar database of the attempts to locate Americans thought to be held in the former Soviet Union.

SAMARITANS

Email: jo@samaritans.org

Use the Internet to email the Samaritans in the UK (also on samaritans@cix.compulink.co. uk or tel 0242 515777). The service follows a successful email test service run in the summer of 1994. For complete discretion, try the anonymous email server at samaritans@anon.penet.fi, although you may have to wait for a reply.

SILENT WITNESS

http://gnl.getnet.com:80/ silent/

This service from Phoenix,

Arizona's police department gives details, often with photographs, of local crimes. If you have any information you can ring a toll free number to help solve the case and claim your reward. Even if you're not a local, you'll find this interesting as another innovative use of the Internet and as an indication of the level of crime in Arizona.

STOLEN CAR REPORT

http://kbt.kbt.com/locator/

Hopefully a useful service for locating and identifying stolen cars will spring from this site. There's not much on show yet, and there are no database browsing facilities, but these are early days yet.

VIETNAM VETERANS

http://grunt.space.swri.edu/index.htm

Lest we forget.

Telecomms

AT&T

http://youwill.com

This is where you find information about the products AT&T has on offer now and in mind for the future. It also provides a communications link for support.

AT&T'S 800 INFORMATION

http://harvest.cs.colorado. edu/brokers/800/query.html

This broker is part of the excellent Harvest WWW search index and was gathered from AT&T's 800 Web pages. This customised broker allows you to browse and search by category, business name and telephone number, and there's even support for misspellings.

FREE FAX SERVICE

http://linuxl.balliol.ox.ac.uk/fax/faxsend.html

As with many Internet addresses, this fledgling service is growing rapidly and seems to have huge potential. Balliol College, Oxford, is the UK home page for what's billed as a free Internet fax server. After you have completed the online fax form, the recipient's name and address is converted to an email address and then routed to the nearest destination computer. This, in turn, restores the



ENTOMOLOGY IMAGE GALLERY

http://www.public.iastate.edu/~entomology/ ImageGallery.html

If pictures and movies of lice, ticks, mosquitos and potato beetles turn you on, you'll enjoy this area and leave it feeling very aroused. If, on the other hand, creepy crawlies make you itch all over, stay well away.

message back into fax format and transmits it through the local telephone network to the addressee's fax machine. There are a few of these sites around the Web, but at this stage they will only work if the destination has a local participator. Try it and see.

NTT

http://www.ntt.jp/

Japanese links and information make this an excellent resource from the Nippon Telegraph and Telephone Corporation in Tokyo. Apart from chapters of material on the services and research efforts of NTT, there's weather, national music, customs, clickable maps, working guides, tourist material, audio language lessons, Japanese site links, legal matters, sports, virtual libraries, news and much more. You can read in either English or Japanese.

PAGE MART -WIRELESS EMAIL

http://www.pic.net:80/pagema rt/pagemart.html

This service sends your email messages straight to your pager, notebook computer or pocket organiser, anywhere in the US. Page Mart supplies a peripheral which plugs into your

notebook's PCMCIA slot and downloads incoming mail.

VOCALTEC

http://vocaltec.com/

Vocaltech is the force behind the Internet Phone, the software package which allows you to use the IRC as a telephone service. It might sound a bit like two cans connected by a piece of string, but it can save you a bundle on international calls.

Time

28 HOUR DAY

http://www.kaplan.com/etc/ bosh/28-hr.html

Living by a 28-hour day, six-day week regime has a number of benefits, according to Mike Biamonte. Fish finally get their wish to do away with Fridays.

CUCKOO'S CLOCK

http://www.galcit.caltech.edu/ ~ta/cgi-bin/cclock-ta

This one gives you the current time in California along with a suitable sound accompaniment – useful if you've got friends in Palo Alto.

GREENWICH MEAN

http://www.yale.edu/cgibin/gmt-saytime.au

This is a great service, just enter this address and, depending on your configuration, within less than a minute you will hear the time played back to you through your speaker. Bit of a shame, it's never correct.

TIME ZONE CONVERTER

http://www.cilea.it/MBone/ti mezones.html

You can link to either of two time zone converters from this page. One is simple, you just click on the region to find the time there. The other allows you to convert from one time zone to another at any time and date, not just the current ones.

TIMEX WORLD TIME

http://www.timeinc.com/vibe/ vibeworld/worldmap.html

By clicking on a world map you can find the exact local time, represented graphically on a Timex watch. A very smart service and a wonderfully unobtrusive product placement.

Transport

EUROPEAN RAILWAYS

http://mercurio.iet.unipi.it/home.html

This site has the usual timetables, news, locomotive pictures and related links, but what makes it really special are the groovy liveries created by ardent train chasers. Some are faithful reproductions depicting national colour schemes while others are fantasy sketches conjuring up futuristic engines you'd almost swap your carrier bag collection for.

RAILROAD INTERNET RESOURCES

http://wwwcse.ucsd.edu/users/bowdidge/ railroad/rail-home.html

A banquet of goodies for trainspotters, rail fans and locophiles. There's maps, databases, mailing lists, transit information, links to and information on other sources of railway interest. A super place to hang out when you get home from Scouts.

RAILSERVER

http://rzstudl.rz. uni-karlsruhe.de/~ule3/ info-trn.html

Access to European detailed railroad information.

THE VIRTUAL RAILROAD

http://gpu.srv.ualberta.ca/ ~ybeaudoi/Virtual_Railroad/ home.htm#menu

An exhilarating introduction for would-be ferrophiliacs to the glamorous pastime of train spotting.

Travel

AIR TRAVELER'S HANDBOOK

http://www.cis.ohio-state.edu/ hypertext/faq/usenet/travel/ air/handbook/top.html

This downloadable FAQ-style travel cookbook will help you beat the system.

CIA WORLD

http://www.ic.gov/94fact/fb94toc/fb94toc.html

An encyclopaedic summary of every county's essential

statistics and details. Disputed zones such as the Gaza Strip and the West Bank are treated as separate countries with their own data. It's not updated frequently enough, though, as neither of these regions' recently won independence is mentioned. The information provided includes geographical boundaries, international disputes, climate, geography, economic indicators, population demographics, government, communications and defence. This is excellent source material for school, travel or business trivia but not enough for a military takeover.

CITY.NET

http://www.city.net/

An excellent guide for browsing community and tourist data from around the globe.

ECHO STREET, SANTA CRUZ

http://www.echo.com/index.html

If you're in Santa Cruz the 'Geeks party and entertainment' guide might stave off boredom.

EDINBURGH

http://www.efr.hw.ac.uk/EDC/ Edinburgh.html

Economic facts, figures, city and

suburban maps, tour guides, history, famous inhabitants and photos of Edinburgh, the second most popular tourist destination in the UK.

GNN TRAVEL RESOURCE CENTRE

http://gnn.com/ cgi-bin/imagemap/ HOME?457,190

There are a few commercial sites featured here, including the conservative travel publishing giant Fodor's and Mountain Travel. Apart from that there are collections of traveller's tales, albums, book reviews and virtual travel guides from almost every country.

GRAND CANYON NATIONAL PARK

http://www.kbt.com/gc/gc_home

This private guide to the Grand Canyon is a work of great dedication and beauty. There are no half measures taken in providing trail and locator maps, track descriptions, history and advice on other local attractions.

INTERACTIVE MAP OF THE UK AND IRELAND

http://www.cs.ucl.ac.uk/misc/uk/intro.html

You'll probably find copies of

this on quite a few sites around the UK, particularly the universities. There's no real limitation to the amount of regional data which can or could be retrieved by this sensible, friendly, point and click interface. There's news, weather, statistics, entertainment, broadcast listings, transport routes and travel times, interactive rail and city maps, guided tours, Web servers and more. It can only grow from here, maybe with your help.

IRISH NATIONAL ARCHIVES

http://www.hea.ie/

Irish news, a dating service, free research information service and international and Irish active maps.

JOURNEY TO THE NORTH POLE

http://www.freenet.ufl.edu/ ~skydive/np.html

Ever had the urge to leap out of an aeroplane above the North Pole? Here's a pictorial travelogue showing how to do it.

LAS VEGAS ONLINE

http://www.infi.net/vegas/online

This tourist service by local CBS affiliate KLAS-TV includes a live online version of their news, weather and sports service. There's business information, shopping, maps, hotel guides and the like, but the virtual tour of Las Vegas is the showpiece. The guide to gaming might be handy, but you can't access the tables online.

LONELY PLANET GUIDEBOOKS

http://www.iol.ie/gnn/bus/ lp/index.html

Despite being the world's largest travel publisher, the information at the Lonely Planet site is far too brief. There's a titles list and an outdated nugatory collection of travellers' tales but, in short, it's a major disappointment.

MAKE A MAP

http://ellesmere.ccm.emr.ca/ wnaismap/naismap.html

Interactive resources on the Net don't come any better than this DIY Canadian map builder. You can specify all sorts of multiple constraints, layers and relief projections, like political



VOLCANO WORLD

http://volcano.und.nodak.edu/

Volcanic intelligence, images, and educational material courtesy of NASA. There's no better place on the Web to monitor the latest eruptions, look at photos of every major volcano in the world, virtually tour an Hawaiian smokey or to shop in a Volcano Mall.

boundaries, geological provinces and even the grizzly bear range.

MAP BROWSER

http://pubweb.parc.xerox.com:80/

Xerox PARC (Palo Alto Research Center) brought the world GUIs (Graphical User Interfaces) and Ethernet. Its public Web site provides, among other things, a graphical world-wide map browser. You can obatin maps showing rivers, borders, and other information, by specifying a location on the globe.

MAPGATE AT DELORME MAPPING

http://www.delorme.com/

Delorme Mapping based in Freeport, Maine, specialises in mapping software, databases and atlases. This site features its online product catalogue, map demonstrations, technical support and employment opportunities within the firm. Products available include paper maps, global positioning systems, computer mapping products and a CD-Rom-based street map of the entire USA.

MCW INTERNATIONAL TRAVELERS CLINIC

http://www.intmed.mcw.edu/ ITC/Health.html

There is token information here on the most prevalent diseases travellers are likely to encounter, symptoms and possible cures. However, with a little more effort this could be a great deal more useful. It gives little in the way of zonal advice, drug contra-indications or outbreak alerts and there's not even mention of dysentery.

OULU, FINLAND

http://www.ouka.fi/ cityinfo_e.html

Sunny Oulu, northern Finland's largest city with a population of just over 100,000, falls somewhat short of a trading metropolis. But, the hotel, local government, enterprise, and municipal information provided here may interest the potential business traveller. No need to bring your own snow.

PARIS

http://meteora.ucsd.edu:80/ ~norman/paris/

Thinking of a trip to Paris? This one provides a virtual tour in



DEALERNET

http://www.dealernet.com

Would you buy a new car off any of these dealers? Unless you're in Washington State, you're not likely to get the chance, but that doesn't stop you from window shopping through the latest range of vehicles on sale stateside. It plans to expand to more than a hundred cities across the country, offering online registration, sales and finance applications, by 1996. It's guaranteed to bring out the car fanatic in you.

English of popular museums, cafés, monuments, shops, rail systems, educational institutions and many other attractions. Or if you really want to punish yourself there's also a version in French. You can do it all through interactive maps or speed things up with text only.

PCTRAVEL

Telnet://pctravel.com

The first publicly available free airline reservation and ticketing service – you can access the Apollo Reservation System to book from a choice of over 500 airlines and, once booked, your ticket can be Fedexed to you from the US. Feedback on this service please.

SCOTTISH HIGHLANDS AND ISLANDS SERVER

http://nsa.bt.co.uk/nsa.html

Compiled by staff at some BT outpost who presumably have little else to do, this promo for the Highlands and Islands initially seems rather arcane. There are sections on leisure and culture, sporting activities and the Gaelic language, but the pages about business activity and distance working in the region are actually very interesting. In fact, there's a lot

of good information here and the pictures and graphics, although they take about as long as the boat trip to the mainland to load, are high quality.

SEE THE WORLD ON A TRAVEL AGENT'S BUDGET

http://international.com/ III/nct.html

This scheme allows you to act as a travel agent, receiving discounted fares and tax perks. You can earn commission if you introduce friends and then they too can enjoy identical benefits. Sounds familiar? What's the catch? Oh, it does have a small registration fee.

STUDENT TRAVEL

http://www.istc.org

Find out where to get an international student identity card and where you can use it. Other information, like travellers' tales, is promised in the future.

THE JERUSALEM MOSAIC

http://wwwl.huji.ac.il/jeru/ jerusalem.html

This pretty but slow site offers a virtual tour through the old city

of Jerusalem, including maps, views and paintings. There's historical data, travel details and links to other Hebrew university information servers via a sensitive map of Israel.

THE VIRTUAL TOURIST

http://wings.buffalo.edu/ world/

Click on the atlas interface to zoom into the region of your choice. Once you're down to country level, you can choose between a resource map, resource list or general country information.

TRAVELS WITH SAMANTHA

http://martigny.ai.mit.edu/ samantha/travels-withsamantha.html

One of the winners in the Best of Web 1994 awards, mainly due to the 250 quality photographs of wildlife and young women, rather than Philip Greenspun's North American travel writing.

US TRAVEL

http://www.stolaf.edu/network/travel-advisories.html

This provides essential information if you're planning to

visit a potential hot spot, but it's not a definitive guide to safety. Potential war zones tend to bubble for years before they attract foriegn media and consular attention, usually after an insurgent group takes responsibility for killing tourists, but after it's died down they may not bother to retract this warning. In other words, don't ignore these bulletins, but seek other advice before postponing your adventure.

WORLD'S LARGEST SUBWAY MAP

http://metro.jussieu.fr:10001/

Pick from a selection of major cities, choose a starting and finishing destination and the algorithm will estimate the travelling time. A fun idea but a joke in practice, due to assumptions such as immediate connections and homogenous flow. "What about signal failure?" I hear you ask. Regrettably, this is one of those sites that's often ignorantly used as an example of the vital information jet-setters can currently glean from the Internet.

Universities

BRADFORD UNIVERSITY

http://www.brad.ac.uk

A nicely produced Web service which includes pictures of and information on Bradford, plus personal home pages, which are always a good source of links to unexpected places.

CAMBRIDGE UNIVERSITY

http://www.cam.ac.uk

Cambridge has the UK's highest Internet usage, both in and around the university and this is the home page for the main university server. Through a Gopher menu, there's probably the UK's most comprehensive collection of local information, from railway timetables and bus services to lists of chemists, dentists, music venues, and much, much more. Alas, no personal home pages yet.

DTB INFORMATION

http://www.dtb.dk

The Technical University of Denmark's home page is still under heavy construction. There's the usual University information – maps, phone books, news, transport, associations and sports – as well as Danish TV and radio listings. It's all well laid out, mostly in English, and worth keeping an eye on.

LIBERTY

Telnet: liberty.uc.wlu.edu

The Liberty server at Washington and Lee University in Virginia provides a Telnet Gopher service which is an excellent starting point.

MIT

http://www.mit.edu

A great university Web server, this includes a large number of student and staff home pages with links to the complete gamut of Internet activity. One quick way to see into the outer reaches of the Internet is via the MIT students' home pages.

SHEFFIELD UNIVERSITY

http://www2.shef.ac.uk

Sheffield is running two main servers, one at this address and another you can link to from here. This other server will eventually be wound down to a Macintosh-orientated site, but still handles most international traffic today. Until the University sorts itself out, you may need to browse back and forth. However, do check out the 'Big Dummy's Guide' for a great online compendium of Internet advice.

SIGWEB UK & I

http://www.qub.ac.uk/sigweb/index.html

This service has been set up to foster relationships between researchers and developers in British and Irish colleges.

WARWICK UNIVERSITY

http://www.warwick.ac.uk/

You'll find information about the university's activities, including limited staff and course details.

Weather

INTERACTIVE WEATHER BROWSER

http://rs560.cl.msu.edu/ weather/interactive.html

Interactive temperature map of

the USA giving detailed hourly updated weather reports.

NATIONAL SEVERE STORMS LABORATORY

http://www.nssl.uoknor.edu/

If tornadoes, blizzards, flash floods, thunderstorms, hurricanes, cyclones, lightning and severe storms are just your bag, then step in here. These guys are not put off by a bit of drizzle spoiling their cricket, they're out whipping up lightning rods on mountain peaks trying to attract the big stuff. If you're a thunder buff, you should read the advice on responsible storm chasing - it may just temper that Pavlovian frenzy for the car keys when the next distant rumble snaps you from your post-prandial stupor.

THE DAILY PLANET

http://www.atmos.uiuc.edu/

This server at the University of Illinois' Department of Atmospheric Sciences, has meteorological maps, satellite images, pointers to sources of climactic data and 'instructional modules'. Although aimed at the

serious sky watcher, this is also a good place to pick up titbits to toss into general weather chat. This site also has one of the best designed contents page graphics on the Net.

WEATHER

http://www.cs.ucl.ac.uk/misc/ weather/weather.html

Digitised satellite pictures to warn you of the impending downpour.

WEATHER FORECASTS FOR THE US

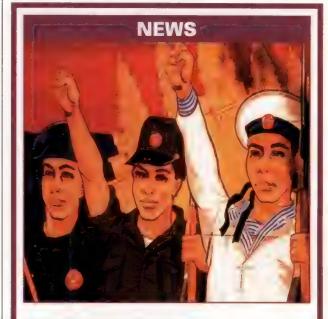
Gopher: wx.atmos.uiuc. edu/11/States

This Gopher service gives current weather forcasts and historical statistics on US regions. It's simple to select from the menu, which is broken down by state and then by city centre or district.

WEATHER INFORMATION

http://web.nexor.co.uk/users/ jpo/weather/weather.html

Regularly updated weather, infra-red and visible light



HOLIDAY IN CAMBODIA

http://none.coolware.com/entmt/cambodia/cambodia.html

The beautiful country of Cambodia has recently been reopened to tourists, only to find itself listed as a no-go area by nearly every foreign consulate in the world. This site presents a gallery of striking pictures and photographs taken from a proposed CD-Rom about the country. Its creators are currently seeking a publisher for the disk, so if you think you might be able to oblige, why not get in contact. Send email to blackbird@ coolware.com. If you've decided to follow the FO's advice and stick to armchair tourism, do drop in and see what you're missing.

satellite images from all over the world, particularly Europe.

Weird!

AUTOGRAPHS

http://www.sofcom.com.au/ Autographs/index.html

Be the envy of your friends – available for a limited time only – send no money, we'll bill you.

BODY PIERCING

http://indyunix.iupui.edu/ ~dlbewley/body-p/body-p.html

FAQs, links, diagrams, pictures, e-zines and warnings.

BURN THIS FLAG LOWLY

http://www.rahul.net/btf/

These abrasive, un-PC pages of Crank magazine may offend.

CARCASS' LYRICS

http://vivarin.pc.cc.cmu.edu/ cgi-bin/lyr.groups?carcass

UK thrash band Carcass'

extreme lyrics read like the ramblings of some psycho-killer. Their music may even be palindromic, it's hard to tell.

CODPIECE INTERNATIONAL

http://www.teleport.com/ ~codpiece/

This site houses a campaign to revive the codpiece, presenting its case in a cute Pythonesque style that may amuse some. It's all lipservice though, as there are neither codpieces for sale here nor sincere intentions. What's the point of that? Oh, to sell sloganed T-shirts, bumper stickers, aprons and boxer shirts, of course.

DAN'S GALLERY OF THE GROTESQUE

http://thelair.zynet.com:80/~grotesk/

Dan's a med student who's going out of his way to display the most bizarre, tasteless and repulsive photograph gallery on the Internet. He succeeds with exhibits like the Foyer of Forensics, Neonatal Nightmares and Children Shouldn't Play with Dead Things, which are teeming

with photographs of bodies decomposing, medical oddities and police forensics. Eat first.

DISASTER O' THE DAY

http://www.ora.com:8080/ cgi-bin/crash-cal

Enter your birthdate and discover its effect on the world.

EXPLODING HEADS

http://www.mit.edu:8001/ people/mkgray/ head-explode.html

Worried that your head may explode? These tips will help you identify early symptoms.

FELINE REACTIONS TO BEARDED MEN

http://web.mit.edu/afs/athen/ org/i/improb/www/cat.html

Bad news for the hirsute.

HYPERCORDIA

http://vaxa.stevens-tech.edu: 8000/jofo/hyperdiscordia.htm

Possibly the most mentally unhinged site in cyberspace – it defies reviewing except perhaps with a single word.

KURT - A TASTELESS MOVIE

http://www.pencom.com/ subdirs/tb/kurt.txt

See Kurt Cobain's last moments, tastelessly depicted in ASCII.

MRS SILK'S CROSS DRESSING MAGAZINE

http://www.cityscape.co.uk/ users/av73/

Mrs Silk can furnish you with a variety of products to ensure that when you do step out of the closet – with style.

ONLINE TOILET

http://wps.com/toilet/index.html

Coprophiliacs, potty heads and porcelain spotters will revel in this virtual toilet. During breaks you can link up to the WPS home page for more anarchy. Don't be caught with this one in your bookmarks.

PIGEON KICKING

http://info.pitt.edu/~katst12/kick.html

Unlikely to get into the RSPCA's good books.

PING DATASCAPE

http://www.artcom.de/ping/ mapper

If you can decipher the technoart rhetoric here, you'll be able to add your own address to the real-time 3D flight through this Internet datascape, brought to you by German international TV station Deutsche Welle.

RANJIT'S LUNCH

http://oz.sas.upenn.edu/ miscellany/lunch.html

A fascinating itemisation of Ranjit Bhatnager's diet with links to Sho Kuwamoto's, Ben Cox's and other crucial lunch servers.

RECTAL FOREIGN BODIES

http://www.well.com/www/ cynsa/newbutt.html

Highlights from Surgery
Magazine, complete with X-rays,
confirming the danger of having
too much fun in the privacy of
your own home.

SPATULA CITY

http://www.wam.umd.edu/ ~twoflowr/index.html

If you're a fan of 3D rendering, you'll probably overlook the inanity of the gags hidden in this collection of pointedly and pointlessly odd pages.

STEPS IN OVERCOMING URGES

http://vector.casti.com/QRD/ religion/mormon-masturbation

Having trouble leaving it alone? You'll find timely advice here.

STRAW POPTART FLAME THROWER

http://cbi.tamucc.edu/ ~pmichaud/toast/

This ground-breaking experiment turns an innocent kitchen appliance into a deadly incendiary device but correct laboratory procedures are strictly adhered to.

VOMITUS MAXIMUS MUSEUM

http://www.vomitus.com/ vomitus/

These surreal macabre images and twisted story captions created by RS Connett are as perverse, grotesque and disturbing as anything you can find on the Web.



GLADIATORS

http://www.cityscape.co.uk/users/ak90/index.htm

This site has all you need to know about the stars of the internationally acclaimed TV show.

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- Creative Concepts for On-Line Advertising
- How to Get Your Products, Brands or Services on to The Internet

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COMMUNICATIONS INTERNATIONAL VIRTUAL CONFERENCES.

In 1995, we are running a series of Virtual Conferences through the magazine and on the Internet. The first Virtual Conference, Networked Multimedia, will commence in April 1995.

WHAT IS A VIRTUAL CONFERENCE?

We've not only cut out the hype, we've cut out the hassle. This is the conference you can join without having to go anywhere — if you can't make it on Monday, you can come on Tuesday... or the week after.

The idea is very simple: Instead of dragging delegates hundreds, or even thousands, of miles to a hotel, we'll drag the conference material itself onto the Internet where it can be downloaded or browsed by delegates at will. Anyone with full Internet access can become an on-line conference delegate.

Best of all it's an application of the subject matter. Yes, radical though it may seem, we're going to hold a high tech conference using high tech.

When you want it....and how you want it.

Not everyone has Internet access. A précis of each paper to be presented at the conference will appear in issues of *Communications International*. Readers will be able to create their own tailormade agenda by choosing a selection of papers which meet their interests. For a small handling charge we'll print out the papers selected and mail them.

Any Questions?

We haven't forgotten about these, either.

Delegates will be able to put questions to authors, just as they would at a real conference.



THE VIRTUAL CONFERENCE IS NOT JUST TIMELY, EASY TO USE AND INEXPENSIVE - IT'S ALSO IN-DEPTH.

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A CONVENTIONAL CONFERENCE, NO MATTER HOW LOFTY THE SPEAKERS,

IS SIMPLY NOT ABLE TO DELIVER ON SUBSTANCE.

But we don't need to sell to you. we're not even going to charge you. Networked Multimedia: the Interactive future, convenes in April 1995.

If you're an Internet User - try it and see-

We'll be publishing the World Wide Web address in our April issue. If you don't have Internet access, the April issue of CI will feature synopses of all the papers so far available and you can choose which papers you'd like us to send you.









Inside Usemet

What it is, how it ticks, where it's at and when to join in. Find what you want without getting your fingers burnt

SO, WHAT IS USENET?

Usenet is a collection of online forums, called newsgroups, each with a single theme such as football, cooking or the intricacies of network transfer protocols. Each newsgroup contains postings from people of varying expertise, requesting or providing information in that specific subject. Making a new announcement or query starts what's known as a 'thread', ie a new line of discussion on a specific topic. Replies to the initial posting get added to the thread. Your Usenet reader should bundle threads together so you can follow the progress of the discussion.

I WANT IT, I WANT IT. HOW DO I GET IT?

Unlike the World Wide Web, Usenet does not require full internet access. If you only require email and newsgroup access just ask for a UUCP (Unix-to-Unix CoPy) connection. Many bulletin boards and Internet shell account providers can supply access to at least a limited number of newsgroups. Even a full access provider may not supply all the groups for logistic reasons or due to a company policy to exclude certain types. While many groups are genuinely educational, businesslike or informative, there are just as many with adult, pornographic, political, provocative or just plain boneheaded material. It's not surprising that many government, educational, corporate and conservative bodies want to filter them.

WHAT SORT OF GEAR DO I NEED?

To access Usenet, you'll need a computer, a modem, a connection to the Internet and a newsreader. There are several shareware newsreaders for every computing platform. Your access provider should be able to provide you with one when you first make a connection. Try a few different applications until you find one you feel comfortable with. Netscape lets

you seamlessly zip from the Web to newsgroups and back, and is satisfactory. However, dedicated packages can add some useful features such as sorting and filtering.

WHO'S IN CHARGE?

The Usenet is a package of files passed around the global network. Whoever passes it on is free to add new postings and whoever's downstream gets what's passed on. Some newsgroups are 'moderated', which means that postings are screened before they appear. Over-moderation, however, can lead to heavy dissent from users. What you see and when you get it depends on who's upstream of your provider and how often it updates the postings. It's usual for providers to delete postings older than about four days and sooner for bigger files like binaries. Due to

the pass-the-ball nature of Usenet transmission your postings may appear immediately on your screen but will take some time to propagate around the world. It's up to you to open discussions, reply to queries, and to help newbies with poor netiquette.

WHAT THE FAC IS NETIQUETTE?

It's considered bad netiquette to dive blind into a newsgroup and post a query or state an opinion which has been covered in a FAQ, or is inappropriate to that group. If you try you might be ignored, flamed, told to go elsewhere or to read the FAQ. Every newsgroup has a few FAOs to answer common questions and give guidelines for posting to the group. It's wise to read these first and then 'lurk' for a while until you feel you have something to add. If

you do get flamed and defend yourself by flaming back you could start a flame war. Once this happens you're likely to be directed somewhere like alt.flame to continue. A comprehensive list of FAQs can be found on the World Wide Web at http://www.cis. ohio-state.edu/hypertext/faq/ usenet/FAQ-List.html

WHAT'S ALT., COMP. AND REC.?

Every newsgroup has a simple address which should tell you what it's about at first glance. The first part classes it in a very general category. The most popular of these are alt. (alternative), bit. (Bitnet), biz. (business), comp. (computer), misc. (miscellaneous), news. (new users), rec. (recreation). sci. (science), soc. (social issues) and talk. (debating). Many localities have their own specific groups such as aus. (Australia), de. (Germany) la. (Los Angeles) and uk. (UK). Each category breaks down further into subgroups - for example rec.sport.cricket.info. This will contain information on the recreational sport of cricket.

WHERE'S THE BEEF?

Several groups may discuss similar subjects but each will have its own very particular identity. For example alt.games.beef may be light and anarchic but biz.marketing.beef would get down to business. Think laterally and use your newsreader's filtering capabilities to search through the Usenet lists for key words.

WHEN'S MY TURN?

Posting is like sending email from your newsreader. You can start a new thread, follow up an existing one or respond privately by email. Exactly when you do it is entirely up to you.

HOW CAN I REMAIN ANONYMOUS?

To post under an alias, use an anonymous server. Look at any of the dodgy groups such as the alt.sex series for more details or email a blank message to help@anon.penet.fi

HOW DO I START ALT.ME.ME.ME?

Creating a new group is not as easy as publishing a Web page. You have to run the proposal past the pedantic news.groups newsgroup where it will be grilled by the hordes. Lurk for a few months first to get an idea of how to play the game. Don't expect any help - it's not a friendly group, but it's one you will have to win over to stand any chance of getting your way.

NEWSGROUPS AT A GLANCE

Cross posting

Sending the same message to multiple newsgroups simultaneously.

FAQ

FAQs (Frequently Asked Questions) are documents scattered around the Internet. Each one answers the most common questions on a specific subject. Nearly every newsgroup has a FAQ - it's good Netiquette to look or ask for the relevant FAQ before grilling the gurus.

Ignore the rules of Netiquette and you will more than likely get flamed, ie receive abusive mail or postings.

Flame war

War breaks out when flaming happens openly as part of a newsgroup thread.

Lurking

Reading Usenet newsgroups without posting responses. Netiquette

The appropriate way to address and interact with other Internet users.

Moderated

Postings to a moderated group will pass before a guru to make sure that they're in the spirit of the group's charter and will add a worthy perspective to the group.

Newbie

A new user.

Post

You send or post a message to appear in a newsgroup.

Smilies and other 'emoticons' can help convey your feelings, ie :-) (look side on). Spam

Cross-posting to many different newsgroups, or

spamming, is frowned upon within the Internet as it wastes bandwidth and clogs up inappropriate groups. Thread

Once a new subject has been started within a newsgroup, and then replied to by other users, this then becomes an on-going conversation. This list of progessive postings is known as a thread.

What exactly do they talk about? John Elliot drops in and follows the threads in eight very different newsgroups

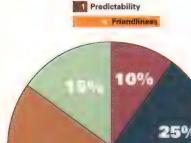
UK.POLITICS

Wide-ranging discussions covering UK politics, economics and current events. Contains gems of well reasoned arguments along with the perennial Labour v Tory debate. A fast moving newsgroup where you can discuss news as it happens.

Recent sustained threads have covered the live exports of animals, the Dresden bombings, Britain in Europe and the forthcoming Tayside, Perth and Kinross by-election. The longest thread during the week monitored the group discussed the 'Student Libelled Lilley on the Internet' story in The Observer which turned into a debate on libel laws, censorship and the future of the Internet.

Posters to the group range from genuine academics, students (Keele University seems well represented) and political activists. There are voices from every part of the political spectrum and you never get the impression that one viewpoint stands head and shoulders above the rest. Recent discussions about splitting the newsgroup may see party political debates and diatribes move elsewhere.

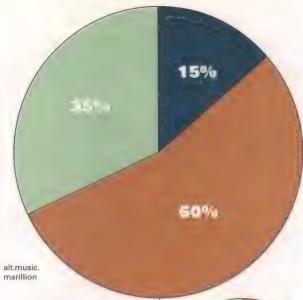
Average messages per day: 150



Flaming

uk.politics

50%



ALT.MUSIC. MARILLION

The rain auditions at my window, its symphony echoes in my womb" - pretentious middleclass drivel or reflective insights on the human condition? What no one can deny is Marillion was a band ahead of its time, with a track on its first album, Script for a Jester's Tear (1983), entitled The Web.

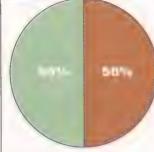
This newsgroup is dedicated to discussions about Marillion's music before the departure of its larger-than-life vocalist Fish, and the merits of both Fish's and the band's continuing careers and albums. If, like me you stopped following Marillion when Fish left, then the vehemence of the postings in this group will at least make you go and listen to the latest Marillion album,

Much discussion is devoted to the relative merits of the many bootleg recordings of the band and how the lyrics of songs evolved from their first airing to the final recorded versions. Posters come from all areas of Europe and the US and there's a healthy trade in information about which videos and disks you can get and which countries you can get them in.

Other topics include the cover art on the albums as well as the similarities and differences between Marillion and other groups such as Genesis, Pink Floyd and the like. The most heated discussion we chanced upon concerned the similarity between Marillion and REM - which led to a new meaning for the acronym AFTP (Internet-speak for Anonymous File Transfer Protocol) Automatic For The People!

This group is fairly representative of alt.music and benefits from a lower degree of predictable traffic than most. Average messages per day: 25

0 Flaming 1 Predictability



ALT.ATHEISM. MODERATED

A newsgroup which some of you might assume was populated by people who don't believe in anything, alt.atheism.moderated in fact features some of the most intellectual and thoughtprovoking exchanges on the Net. Much of the discussion centres around the existence (or otherwise) of the Christian God and the various denominations of Christianity are all well represented with reasoned arguments. Reading is not for the faint-hearted as many discussions are long and involved. Some posters obviously spend a fair amount of time thinking about, and structuring, their cases,

I had expected there to be more religious zealots in the group who couldn't ever see the atheist's point of view and was happily surprised at the dispassionate tone of the postings, even in discussions such as "Is someone who believes in God insane?". The most involved thread the week we lurked was entitled, "I disprove God and figure out what holds atoms together,' which primarily addressed the requirements of some posters to have proof of something before they would believe it existed. Being a moderated newsgroup it's flame- and bigot-free. Average messages per day: 20

3 Predictability

COMP.DCOM.LANS. ETHERNET

Typical of the comp. section of newsgroups, this is a collecting ground for people's problems getting Ethernet networks to work. The range of technical problems addressed is extremely wide, ranging from real novice's queries to very involved problems concerning packet headers and routing. The range of posters is indicative of the questions and similarly ranges from obviously professional engineers to people installing their first lan. However, the group is disappointing as the community isn't that helpful: of five days' worth of messages, which were nearly all questions, only about 30% received an answer, and it's mainly the simple ones that went unanswered.

What the group needs are some philanthropic gurus who will take it upon themselves to help out the newbies.

But maybe it's all down to the competitive nature of manufacturers and consultants who don't want to release information unless someone's going to pay for it! Average messages per day: 15

0 Flaming

0 Predictability

Friendliness







BIONET.DROSOPHILA

Anyone who did the basics of genetics at the same time as I did will remember the cruel fate of the common fruit fly, or drosophila. If you can't remember, or missed out on murdering their seven-day-old incarnations, then the experiment was meant to show that genetics are hereditary measured by the presence, or absence, of wings on the flies you bred. Well, if you thought that was it for the fruit fly's contribution to biological science you might be interested to hear that some people have got hooked on these little creatures and are still conducting experiments on them. Most of the postings in this newsgroup are highly scientific in nature and concern themselves with mapping the DNA of the drosophila. Again it's one of those groups that needs a wider and more active audience as many of the questions go unanswered. Just as in computing, maybe scientists are just horribly competitive. Average messages per day: 3

- 0 Flaming
- 0 Predictability

Friendlimeas

bionet.drosophila

UK.JOBS.OFFERED

Much cheaper than buying The Guardian on Thursday and The Times on Sunday, this is the place to find a new job. If you don't have full IP access and therefore can't visit any of the Web sites run by major recruitment companies, it's also an economic way of finding out about employment opportunities online.

Used by many agencies and companies, all postings fall under the categories of IT, engineering and computing, and cover many types of systems.

There are very few replies to posts and people just use it as if they're placing an advertisement.

I spotted one discussion thread about whether to move the relevant postings (currently, all of them) into a separate group: uk.jobs.computing. offered. The argument is that it would encourage more non-IT use of the Net if general appointments were easier to find.

Other groups in the uk.jobs section that you might also find appealing are uk.jobs.wanted, which is where you can post your CV when the boss has really messed your life up (but you might consider posting via an anonymous remailer); uk.jobs.contract which gives

details of temporary works for those mythical maligned computer contractors; and uk.jobs.d which is a general forum for discussing the jobs market and how to approach employers and industry sectors. The usual statistical analysis isn't relevant to this group but a glance below at the daily message total rather begs the question: who said there's no iobs around? Average messages per day: 60

REC.PETS.DOGS

Maybe dog loving and computers don't sit well together but this group's size and content were disappointing if you consider how many people own dogs. A few threads we saw dealt with particular problems such as how to train a deaf puppy but the majority of space was taken up by a long discussion about advertising on the newsgroups. This was because a few of the rec.pets groups had recently received such material.

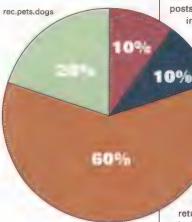
The longest thread concerned pit bull fighting which certainly wasn't one of the most simulating or reasoned discussions I've read on the subject. It's one of those groups that gets visited occasionally by deliberate flamers and you get the feeling that the average dog lover is always cautions about what s/he says. This is undoubtedly a newsgroup that could be more useful but at the moment, like my 12 year old mongrel, it's maybe seen better days. Average messages per day: 10

2 Flaming

0 Predictability

Friendliness





MISC.INVEST.FUNDS

misc.invest.funds

In the UK we call them unit trusts but to most posters to this group they're mutual funds. The bias of this group is towards the US investor, However, this doesn't mean that the posts are of no interest to budding George Soros's in the UK. A good half of the posts follow the theme, "I've heard this fund is great and I'm thinking of buying it. What do other people think?" Many such posts generate a couple of replies which are based on experience. There's no real flaming in the group but questions that could be answered by reading the FAQ or just by buying one of the many monthly magazines published on the subject receive appropriately terse answers.

The group's charter permits advertising and a good 10% of posts offer newsletters or investment services.

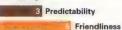
However, the advertising is not blatant and

always trades some information in return for the advert. The group is of interest to the UK investor as many of the mutual funds mentioned can be purchased here. What's of no interest, however, are the cries for help from people trying to complete their tax

returns and asking how they calculate some of the figures that are required by the US Government; these comprise 5% of traffic and are always answered helpfully.

Average messages per day: 40

0 Flaming



Signature of the month

"It can be shown that for any nutty theory, beyond-the-fringe political view or strange religion there exists a proponent on the Net. The proof is left as an exercise for your kill-file." d9bertil@dtek.charmers.se

UNDERSTANDING THE STATISTICS

THE TABLE

Flaming index: Marks out of ten for the amount of messages that are obviously inflammatory and best ignored.

Predictability index: Postings that are

Predictability index: Postings that are predictable, repetitive or just plain boring, eg "John Major's the best prime minister we've ever had."

"No he isn't."

"Of course he is. Blair's a bonehead."

"Well you would say that wouldn't you, you're a Tory!" ...would warrant an index of 10. Friendliness: How open the newsgroup is to new posters – there's nothing worse after you've summoned up the courage to contribute to a group for the first time than to be answered rudely. Nice groups get a 10, cliquey ones get nothing.

THE PIE CHART

Based on message volume this shows how many people are active in the newsgroups. Those with a high percentage of bigots tend to be fairly cliquey and threads are generally uninformative.

Gurus: Posters who generally can contribute intellectually and informatively to a number of discussions, often clearing up arguments or dampening down heated discussions. The unofficial moderators of the Usenet.

Bigots: The contributors who'll always say the same thing – often without much thought about whether it's appropriate or not.

Activists: Contributors who participate freely in a number of discussions with well argued or informative postings.

Tourists: Occasional posters.



-TUM

Newsgroups – what are they about?

Name	Descrit	Name	Descrip
alt.3d	Three-dimensional imaging	alt.hangover	Hairy dog stories.
alt.agriculture.misc	A cultivated gathering	alt.hindu	The Hindu religion (moderated)
alt.architecture	Building design/construction and related topics	alt.history.what-if	What if I just push this button?
alt.architecture.alternative	Non-traditional building designs	alt.horror	Be afraid, be very afraid
alt.ascii-art	Pictures composed of ASCII characters	alt.hypnosis	When you awaken
alt.asian-movies	Chewing the Chow Yun Fat	alt.irc.questions	Solving IRC (Internet Relay Chat) queries
alt.astrology	Soothsaying	alt.journalism	Newshound shoptalk
alt.atheism	Dogma discussed	alt.magic	Now you see it
alt.backrubs	Lowerto the rightaaaah!	alt.missing-kids	Locating missing children
alt.bbs	Computer BBSs and software	alt.music.kylie-minogue	Is she Elvis?
alt.bbs.internet	BBSs hooked up to the Internet	alt.music.prince	About the artist formerly named after a dog
alt.bbs.lists	Postings of regional BBS listings	alt.paranormal	Bent fork talk
alt.beer	Good for what ales ya	alt.personals	Make friends and influence people.
alt.binaries.multimedia	Animal sound files	alt.politics.british	Major controversy.
alt.binaries.pictures	Encoded image files	alt.politics.org.misc	Political organisations across the spectrum.
alt.binaries.pictures.anime	Images from Japanese animation	alt.prisons	Dealing with porridge.
alt.binaries.pictures.cartoons	Cartoon stills	alt.privacy	Keeping out cybersnoopers.
alt.binaries.sounds.utilities	Programs for manipulating and playing sounds	alt.psychoactives	Better living through chemistry
alt.books.reviews	Join the critics	alt.radio.pirate	This goes out to the one with the name like the
alt.books.technical	Technically speaking	alt.radio.scanner	How to snoop on the airwaves
alt.business.misc	All aspects of commerce	alt.romance	Love, exciting and new
alt.business.multi-level	Selling through friends and peers	alt.sci.sociology	Human watching
alt.cad	Computer-aided design	alt.security	Keeping hackers out
alt.cancel.bots	Geting rid of unwanted visitors	alt.sex	What it's like and where to get it
alt.censorship	How freely should you speak?	alt.sex.bondage	I'd like to but I'm tied up right now
alt.christnet	Christian jamboree	alt.sex.fetish.feet	A foot in the door
alt.christnet.philosophy	He forgives, therefore he is	alt.shenanigans	Practical jokes
alt.comedy.british	Best of British chuckles	alt.supermodels	Up, up and away with Kate and Claudia
alt.comics.alternative	Counter-cultured cartoons	alt.support	Dealing with crisis
alt.consciousness	Philosophical discourse	alt.support.eating-disord	Dealing with anorexia before it wrecks ya
alt.conspiracy	Paranoia and corruption	alt.surfing	Surfboard waxing
alt.consumers.free-stuff	The Milky bars are on us	alt.tasteless	Be warned – a nasty site at the door
alt.cult-movies	Fanatical films	alt.tasteless.jokes	Humour of an out-of-favour flavour
alt.culture.internet	The culture(s) of the Internet	alt.true-crime	Natural born thrillers
alt.culture.riot-grrrls	Young womens' culture magazines	alt.tv.x-files	Special agent Scully-duggery
alt.culture.usenet	Finishing school for Usenetters	ausjobs	Jobs offered and wanted by Australians
alt.current-events.net-abuse	Usenet spamming	ausjokes	Has degenerated into a trans-Pacific slanging match
alt.current-events.russia	The rise and fall of the KGB	bionet.announce	Biological news (moderated)
alt.cyberpunk.tech	Cyberspace and cyberpunk technology	bionet.biology.tropical	Research in tropical biology
alt.cyberspace	The final frontier	bionet.jobs	Scientific job opportunities
alt.devilbunnies	They're cute, but they want our planet	bionet.software	Biological software discussion
alt.dreams	Welcome to my nightmare	bit.admin	Maintenance of bit.* newsgroups
alt.drugs	Getting in to getting out of it	bit.general	Discussions relating to BitNet/Usenet
alt.drugs.caffeine	Pros and cons of a legal addiction	bit.listserv.help-net	Help on BitNet and the Internet
alt.evil	Tales from the dark side	bit.listserv.new-list	New list announcements (moderated)
alt.fan.bill-gates	Lovers of the original micro-softie	biz.clarinet	Announcements about ClariNet newsfeeds
alt.fan.frank-zappa	The late Bohemian cultural minister	biz.clarinet.sample	ClariNet news samples
alt.fan.holmes	Sherlock or Long John?	biz.comp.hardware	Commercial hardware postings
alt.fan.james-bond	On his Majesty's Secret Service	biz.comp.services	Commercial service postings
alt.fan.madonna	A dwindling cause	biz.comp.software	Commercial software postings
alt.fishing	Aquarian bloodsports and size lies	biz.jobs.offered	Employment opportunites
alt.flame	Insults and abuse	biz.misc	Commercial postings
alt.folklore.military	Warfaring reminiscences	comp.ai	Artificial intelligence
alt.folklore.suburban	Serious discussion of urban legends	comp.binaries.ibm.pc.wanted	and the second s
alt.food.fat-free	Laying off the chips and chocolate	comp.binaries.mac	Encoded Macintosh programs (moderated)
	The ultra-violent cult PC game	comp.binaries.ms-windows	Programs for Microsoft Windows (moderated)
	, Jing thoront dutt to guine	POHID: DHIGH 100: HIQ. MITIGOMS	1 109 anns for Miletozoff Millidoms (Miletafed)
alt.games.doom alt.gopher	Navigating Gopherspace	comp.binaries.newton	Apple Newton files

Newsgroups – what are they about?

Name	Descrip	Name	Descripus
comp.client-server	Topics relating to client/server technology	misc.invest.real-estate	Profiting from real estate
comp.compression	Data compression algorithms and theory	misc.invest.technical	Economic forecasts using charts
comp.databases	Data management issues and theory	misc.jobs.offered	Information technology-related jobs
comp.databases.ms-access	MS Windows' relational database system	news.announce.important	General announcements to all (moderated)
comp.dcom.lans.misc	Local area network hardware and software	news.announce.newgroups	New groups available and wanted (moderated)
comp.dcom.lans.token-ring	Installing and using token ring networks	news.announce.newusers	Explanatory postings for new users (moderated)
comp.dcom.modems	Data communications hardware and software	news.groups	Discussions and lists of newsgroups
comp.dcom.telecom.tech	Technical aspects of telephony	news.groups.questions	
comp.fonts	Font speak	news.lists	Where can I find talk about topic X?
comp.graphics	Computer created graphics	****	News-related statistics and lists (moderated)
comp.infosystems.interpedia		news.lists.ps-maps	Maps relating to Usenet traffic flows (moderate
comp.infosystems.www	The World Wide Web information system	news.newusers.questions	Q & A for new users
comp.infosystems.www.misc		rec.answers	Repository for periodic Usenet articles (moderated
		rec.antiques	Second-hand news
comp.infosystems.www. providers	WWW information provider issues	rec.aquaria	Something fishy
	Yo	rec.arts.animation	Moving pictures
comp.internet.library	Discussing electronic libraries (moderated)	rec.arts.anime	Japanese animation
comp.lang.c++	The object-oriented C++ language	rec.arts.ascii	Pictures from ASCII characters (moderated)
comp.mail.misc	General discussions about email	rec.arts.bonsai	Horticultural bondage
comp.mail.uucp	Unix to Unix CoPy Mail	rec.arts.books	Book nook
comp.newprod	Announcements of new computing products	rec.arts.books.marketplace	Online bookshop
comp.os.ms-windows.	Speculation and debate about	rec.arts.cinema	Film discussion (moderated)
advocacy	Microsoft Windows	rec.arts.comics.info	Comic reviews and announcements
comp.os.ms-windows.	Announcements relating to Windows	rec.arts.comics.marketplace	Buy and self comics
announce	(moderated)	rec.arts.dance	Miscellaneous dance forum
comp.os.ms-windows.	MS-Windows communication applications	rec.arts.erotica	Erotic fiction and verse (moderated)
apps.comm	The trincome communication applications	rec.arts.fine	The fine line between art and
comp.os.ms-windows.	MS-W/indows applications	rec.arts.misc	
apps.misc	MS-Windows applications		Discussions about the arts not in other groups
		rec.arts.movies	Movies and movie-making
comp.os.ms-windows. apps.word-proc	MS-Windows wordprocessing applications	rec.arts.movies.reviews	Films reviewed (moderated)
comp.os.ms-windows.misc		rec.arts.poems	Poetry in motion
	General discussions about Windows issues	rec.arts.sf.announce	Major announcements of the SF world (moderated
comp.os.ms-windows. networking.tep-ip	Windows and TCP/IP networking	rec.arts.sf.marketplace	Science fiction trading
		rec.arts.sf.movies	Science fiction films
comp.os.ms-windows.	Windows' built-in networking	rec.arts.sf.reviews	Science fiction works reviewed (moderated)
networking.windows		rec.arts.startrek.fandom	Star Trek conventions and memorabilia
comp.os.ms-windows.nt.misc	General discussion about Windows NT	rec.arts.startrek.tech	Star Trek's depiction of future technologies
comp.os.ms-windows.	Programming Microsoft Windows	rec.arts.theatre.misc	Miscellaneous topics and issues in theatre
programmer.misc		rec.arts.theatre.plays	Dramaturgy and discussion of plays
comp.os.msdos.mail-news	Administering mail and network news systems under MS-DOS	rec.arts.tv	Television talk
		rec.arts.tv.soaps	Soap opera discussion
comp.os.os2.networking.	TCP/IP under OS/2	rec.arts.tv.uk	UK television enthusiasm
ep-ip		rec.audio.high-end	Audiophile equipment (moderated)
comp.periphs.printers	Information on printers	rec.audio.marketplace	Stereo trading
comp.protocols.iso.x400	X.400 mail protocol discussions	rec.audio.pro	Professional sound recording
comp.protocols.tcp-ip	TCP and IP network protocols	rec.autos.driving	Motoring discussion
eomp.protocols.tep-ip.ibmpc	TCP/IP for PCs	rec.autos.marketplace	Buy/sell/trade automobiles
comp.society.privacy	Effects of technology on privacy (moderated)	rec.aviation.announce	Flying news (moderated)
	Software for Sun workstations (moderated)	rec.bicycles.marketplace	Buying and selling bikes
	Finding people to test software	rec.bicycles.misc	General bike bante
	Requests for software and fixes	rec.birds	
	Discussions of Macintosh applications		Bird watching
		rec.boats	All apects of water transport
	Discussions of games on the Macintosh	rec.climbing	Scaling new heights
	Administering a Unix-based system	rec.collecting	Accumulating similar objects
	Unix neophytes group	rec.crafts.brewing	The art of making beers and meads
Annabases :	Info-Nets mailing list	rec.crafts.jewellery	Making jewellery
	Discussion on operating a business	rec.crafts.winemaking	Making wine
nisc.fitness	Physical fitness	rec.equestrian	Horsing around
nisc.health.diabetes	Coping with diabetes	rec.food.cooking	Meal preparation

Newsgroups – what are they about?

Name	Descripti	Name	Descrip
rec.food.drink	Liquid refreshment	sci.geo.satellite-nav	Satellite navigation systems
rec.food.drink.beer	All things beer	sci.life-extension	Drinking the fountain of youth
rec.food.drink.coffee	The making and drinking of coffee	sci.math	Mathematics
rec.food.recipes	Cooking instructions (moderated)	sci.med	Medicine, drugs and regulations
rec.food.veg	Living without meat	sci.med.aids	Aids news
rec.food.veg.cooking	Vegetarian recipes	sci.med.dentistry	Caring for teeth
rec.gambling	Beating the odds	sci.med.nursing	Nursing questions and discussion
rec.games.mud.misc	Multi-user dungeon computer games	sci.med.nutrition	Eating well
rec.games.video.arcade	Coin-operated video games	sci.med.pharm	Pharmaceutical discussion
rec.gardens	Gardening	sci.military	The science of warfare (moderated)
rec.guns	Firearms (moderated)	sci.misc	Short-lived scientific discussions
rec.humor	Joke-cracking	sci.physics	Physical laws
rec.martial-arts	Fighting forms	sci.psychology	Human behaviour
rec.models.railroad	Model railroads of all scales	sci.skeptic	Questioning pseudo-science
rec.models.rockets	Making hobby rockets	sci.space.news	The final frontier (moderated)
	1 manage 1 1 m 1 m 4/1 m 200100	sci.stat.math	Statistically speaking
rec.motorcycles	Biker hangout	sci.virtual-worlds	Virtual reality - technology and culture (moderated
rec.music.classical	Classical music		General issues related to graduate schools
rec.music.industrial	Metal machine music	soc.college.grad	A REPORT OF THE PERSON OF THE
rec.music.info	Music news (moderated)	soc.culture.arabic	Islamic societal issues
rec.music.makers	Performers and their followers	soc.culture.british	Being British
rec.music.makers.	Instrument trading	soc.culture.europe	The question of one-Europe
marketplace		soc.culture.israel	Israel, Judaism and Zionism
rec.music.makers.synth	Synthesisers and computer music	soc.culture.palestine	Middle Eastern politics and Palestine
rec.music.marketplace	Record trading	soc.feminism	Women wanting more (moderated)
rec.music.reviews	General music criticism (moderated)	soc.history	Looking backwards
rec.music.video	Budding Beavis and Buttheads	soc.history.war.misc	Past conflicts
rec.nude	Naked truths	soc.men	Men wanting more
rec.org.mensa	High IQ club	soc.religion.christian	Followers of Christ (moderated)
rec.pets.cats	Cats and their uses	soc.religion.eastern	Eastern religions (moderated)
rec.pyrotechnics	Getting a blast out of life	soc.religion.islam	Followers of Mohammed (moderated)
rec.radio.amateur.misc	Amateur radio practices	soc.singles	People without partners
rec.radio.broadcasting	Global domestic broadcast radio (moderated)	soc.women	Women and their stuff
rec.radio.scanner	Airwave snooping	talk.answers	Periodic talk.* articles (moderated)
rec.radio.shortwave	Tuning in to the world	talk.bizarre	Believe it or not
rec.radio.swap	Trading radios	talk.origins	Evolution versus creationism
rec.railroad	Trainspotting	talk.philosophy.misc	Navel cyber-gazing
rec.skiing.snowboard	Snowboarding techniques	talk.politics.animals	Animal activism
rec.sport.cricket	22 hungover men take turns to stand in the sun	talk.politics.china	Action behind the bamboo curtain
rec.sport.golf	Driving the dimpled ball to drink	talk.politics.drugs	The great pot debate
rec.sport.rugby	Men bash each other to move the ball forward	talk.politics.misc	Everybody wanting their piece of the action
rec.sport.soccer	Overcoming the urge to use your hands	uk.announce	UK news
rec.travel.air	Defying gravity	uk.events	UK forthcoming events (conferences etc)
rec.travel.marketplace		uk.finance	UK financial issues
-	Tickets and accommodations wanted and for sale		UK trading post
sci.aeronautics	The science of flying (moderated)	uk.forsale	- quantum and an
sci.agriculture	101 things to do with dirt	uk.jobs.offered	Situations vacant in the UK, mostly IT jobs
sci.answers	Repository for periodic science articles (moderated)	uk.jobs.wanted	Situations wanted by Brits
sci.anthropology	The study of human evolution	uk.legal	UK legal issues
sci.archaeology	Life in ruins	uk.media	The gentle UK media
sci.astro	Staring into space	uk.misc	General interest to everyone on UKnet
sci.bio	Life sciences	uk.net.maps	Information finding UK server
sci.chem	Chemistry	uk.net.news	News about UK networks
sci.econ	The science of economics	uk.politics	UK politics
sci.engr.chem	Chemical engineering	uk.radio.amateur	UK hams
sci.engr.civil	Civil engineering	uk.rec.cycling	Cycling in the UK
sci.engr.control	Control systems engineering	uk.singles	UK personals
sci.engr.mech	Mechanical engineering	uk.telecom	Discussion of UK telecommunications
sci.geo.geology	Earth sciences	uk.transport	UK transport issues
	Weather and its effects	uk.wic	British women in computing

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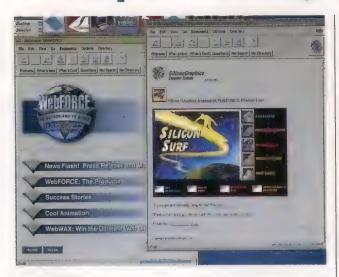


Reviews

Smart Web publishing, smooth browsing, cheap foreign calls – our experts cover the range of Net-related products

INDY WEBFORCE

Jurassic Park maestros create Web publishing dream machine



he World Wide Web is a wonderful thing but until now the process of single-handedly generating Web pages and putting them on the Internet has been a miserable experience of homegrown server creations and shareware lash-ups. However, Silicon Graphics (SGI) has just appeared on the scene with an amazing platform for aspiring World Wide Web publishers - the Indy WebForce.

WebForce is a well integrated combination of Web authoring and serving software run atop a Silicon Graphics Indy workstation or Challenge server. The bundled Web browsing software is familiar to PC and Mac pilots: a version of Netscape Navigator 1.0. The proffered server software is from Netscape, too. Neither is surprising as Netscape and SGI share a founder and are physically yards apart in Mountain View, California.

Unknowingly you have probably seen an Indy before. In Jurassic Park there are several walk-on parts taken by SGI computers (and they were used behind the scenes to create the dinosaurs, too). Unix-lovers swooned en masse as a ten-year-old kid walked into the park's stricken operations centre, spotted an Indy and saved the day after uttering the immortal line, "Hey, that's a Unix workstation - I know how to work that!"

But I suspect that very few of even you, dear readers, would know how to control this Unix beastie if it got in a temper. While SGI has done a good job of insulating the user from the ferocity of Irix when the Indy is employed as a Web authoring platform, Unix is still Iurking beneath the surface of the Motif-based GUI, waiting velociraptor-like, to bite you. But as long as there is a friendly Unixoid

friend to set your Indy up (and kept fed and watered nearby to tweak and tune), you can relax and enjoy what must be the finest Web content-creator extant.

On screen, the WebAuthor is rather DTP-like in that you assemble elements of a Web page by dragging, dropping and picking features from a menu. In no time you can have a snazzy Web page with sound, video, graphics, fonts galore and hypertext links ready to party.

The bundled IndyCam video camera is a useful adjunct to the process. While the desk-to-desk videoconferencing element of Indy usage is still in the early stages, the camera mounted atop the Indy's 16 inch monitor (1280x1024) makes it easy to get reasonably good quality still pictures, or indeed motion videos, onto page. Good lighting is required but the software is a breeze to operate. You have your choice of video compression algorithms, too, though SGI is pushing CinePak.

The operating environment is Irix, SGI's version of Unix SVR4. It has a graphical front-end called Magic and a load of bundled software (beside the WebForce elements). While there is a MIPS processor version of Microsoft Windows NT, SGI remains silent about running NT.

High performance is a religion for SGI. Instead of a hot pentium, SGI employs a 64 bit MIPS R4600PC (PC for Primary Cache) clocked at 133MHz. The processor-tomemory bus runs at 40Mb

per second and the standard 32Mb of memory can be expanded to 256Mb. Indy has a SGI proprietary 64-bit GIO IO bus that hums along at 267Mbps. The slowest part of Indy, the SCSI 2 bus, runs at 10Mbps.

As to the relatively quiet and compact Indy hardware, it's a pleasure to work with as long as the snarls from underneath SGI's Magic user environment don't distract you.

The standard
WebAuthor package comes
with a paltry (for SGI) eightbit graphics board. A
gigabyte of disk purrs away
but you can get lots more
storage inside the trim box.
The integrated SCSI
interface lets you add
external bits and pieces like
a QIC backup drive, scanner
or CD-Rom reader/writer.

While the Indy WebForce is better equipped in terms of standard equipment than your average PC (with things like digital signal processor, six-channel audio and non-BT approved ISDN ports), some standard trimmings are conspicuous by their absence. As it is, a CD-Rom drive or amplified stereo speakers are crucial to the full *Terminator II*-standard Indy experience.

Most SGI kit is used for high-end 3D modelling (seen *The Abyss?*) but that power is largely wasted on the 2D world of Web pagemaking. For £14,490 you can get the Indy set up with a 24-bit graphics card if you have the need, and from there the graphics options go up – way, way up.

If you want to use the Indy as a server, no

problem. However, SGI recommends that you get dedicated server hardware for the best throughput (and to keep the developers off a delivery platform). Good Web experiences are all about interactivity and an SGI server, so they say, stomps the competition by delivering more interactivity through less delay at the user end. SGI says the Web's nemesis is bad server design; the bottlenecks aren't all the fault of 14.4kbps modems.

The entry level WebForce server of choice is a Challenge S box with no graphics card at all. A 100Mhz R4600PC keeps company with a 1Gb hard disk and 32Mb of memory. Including two Ethernet interfaces, the Challenge S retails for £11,180.

However, there is a server problem. Although a US price has been set for the requisite Netsite Commerce Server software (the one with the built-in RSA security which permits secure transactions), the product is not yet in the UK. Apparently Netscape has taken a few pages from the Microsoft marketing manual. You get the less secure Netsite version instead.

When it materialises, the price set for the Netsite Commerce Server on Netscape's Web pages is a mere \$5000, a big drop from the \$25,000 that was touted back in November when it should have been launched.

If you are hot to get moving as a Web content provider, the SGI WebForce package is the best around. You pay a price which is three times higher than a similarly equipped PC, but that PC wouldn't come with Silicon Graphics WebAuthor and that is the star of this show. Web professionals deserve, and here they get, the finest tools.

Paul Lavin

Review in brief

INDY WEBFORCE -FROM £9100

Pro: The first fully integrated Web authoring/ server package, accompanied by wonderful authoring software.

Con: Pricey and the RSAsecure server software is as yet unavailable in the UK.

Contact: Silicon Graphics Tel: 01734 306222 Email:ukmarketing@sgi.com

MAIL-IT VERSION 2.5

Unipalm's best email effort so far



ail-it, the email portion of the Unipalm/Pipex Solo suite of Internet software, is a state-of-the-art email package. And it has just been reincarnated in a version which – many will be pleased to hear – fixes many of the earlier bugs.

The crucial feature of Mail-it Version 2.5 is its compatibility with, and user-friendly treatment of, MIME (Multipart Internet Mail Extensions). With MIME, files sent as extensions arrive in their native format without need for decoding – and it's setting the standard for all email software.

However, Pipex has recognised that MIME really only does half the job. It enables you to receive a file ...but then what? Many users wouldn't know where to find the received WordPerfect file on their

hard disk. Nor would it be obvious that a file with the extension .WKS is best loaded into Lotus 1-2-3. So Unipalm has included something to make life easier.

The Rules facility enables an experienced user, or more probably a systems manager, to automate entire parts of the Internet mail process. As soon as Mail-it receives a message, it examines it and stores it in a logical place so that an ordinary user can find it. It can even open up the relevant software to display the file when it arrives. Rules can be accessed by opening up the Custom menu and then picking the Tasks option.

In truth such a powerful feature requires a whole tutorial by itself. Even experienced users aren't going to spend time experimenting to see what extra uses Rules might have.

Besides MIME, Mail-it is also compatible with MAPI (Messaging Application Programming Interface), which allows you to send email from within a Windows package (which must itself be MAPI-aware).

One of the minor improvements made to this version of Mail-it concerns the way Internet addresses are stored. Once Mail-it identifies a new address it will automatically ask if this person should be inserted into the user's addressbook.

Among the earlier bugs which this version of Mail-it deals with is the dragging and dropping facility whereby files would be automatically mailed – except it didn't always work.

The Rules feature will be immensely useful for the new Net user who soon finds that a trickle of messages quickly develops into an unmanageable flood. If Unipalm can supply a full user manual, (we only had early test/beta software) then the average user will be able to liberate all of Mail-it's powerful features, including Rules.

Mail-it can definitely be described as a state-of-the-art email package – and version 2.5 has hopefully fixed those bugs. If you just want Mail-it (not the complete Solo suite), it is available for £50; a five-user pack costs £200 with the ten-user version at £365.

Review in brief

MAIL-IT VERSION 2.5 - £50

Pro: Compatible with latest standards – 'smart' treatment of mail, addresses and extension files.

Con: Requires studied configuration to make the most of all those benefits.

Contact: Unipalm Tel: 01223 250 100 Email: mail-it@unipalm.co.uk

INTERNET PHONE

Serious foreign calls for silly prices



aunched in February, the Internet Phone, has already made a big impact in the online community.

Using super-efficient compression algorithms, the Internet Phone, (IPhone for

short), enables one-to-one audio conferencing on the Internet using only a 14.4kbps modem and a soundcard. However, you must have a SLIP/PPP connection and TIA (The Internet Adaptor) users can

only receive but not send, audio data.

IPhone works a bit like CB. Users are connected to IPhone channels on IRC (Internet Relay Chat). Communicating with someone is a simple matter of clicking on their name.

If the party you are calling is not engaged and accepts the call, the digitised voice data is sent directly between the two machines using IRC DCC (Direct Client-to-Client connection). The majority of soundcards cannot record and play back digitised audio at the same time and IPhone reflects this

by letting you speak and listen, but not simultaneously.

IPhoners can join or create public and private channels. A quick check on IRC is enough to reveal its popularity, with channel names ranging from Binary Belly to the obligatory Sex.

Quality is around 85% to 90% of ordinary phone lines, though over tardy networks you get slight chop. There is also a short delay while the packets travel to and fro over the Internet.

Bandwidth consumption is low at approximately 7.7kbps, so even with a conversation in progress you can FTP and Telnet with no loss of quality. The downside is that those clever algorithms weigh down the CPU – VocalTec recommends a 486SX25 with 8Mb Ram.

At the moment IPhone users are limited to one-to-one communication but future developments will include versions to handle multi-user conferencing and broadcasting. A version for Macs is also in the pipeline.

A demo is available at ftp://vocaltec.com/pub/iphone6a.exe. It's fully functional but limited to 60 seconds of conversation.

IPhone is the first of its kind but certainly not the last; the same day IPhone was released Camelot Corporation (0101 214 733 3005) announced the release this summer of its Personal Internet Companion Kit (PICK), which promises the same as IPhone but with higher fidelity even than ordinary telephones.

The software is pretty robust, well-featured and has an unusually good help file. Installation takes seconds. The IPhone is a serious contender for long-distance voice communication. Could it become as ubiquitous as fax or email?

Stephen Angell

INTERNET PHONE \$99 (\$49 FOR A LIMITED PERIOD)

Review in brief

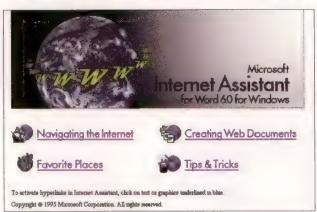
Pro: Reliable, easy to use and a serious alternative to longdistance calls. At last, a way to wreak revenge on BT!

Con: Slight choppiness.
Contact: VocalTec

Tel: 0101 201 768 9400 Email: info@vocaltec.com Web: http://vocaltec.com

INTERNET ASSISTANT FOR WORD 6.0

Just-a-minute Web publishing on offer to



nnounced at Comdex Fall, Microsoft's Internet Assistant for Word 6.0 for Windows, available free of charge to existing licensed Word 6.0 users, allows you to create the type of documents that you browse on Web servers. Designing such documents was, until now, something of a programmer's art.

You can download the beta release (0.95) version of Internet Assistant from ftp.microsoft.com. As we

go to print it only works with the 'bought in America' version of Word but over the coming weeks all versions should be supported.

To convert a Word document into HTML you merely open it then save it as the option, HTML.

If you've not used a style sheet to format the document then you should use Word's AutoFormat utility first. To compose a new HTML document, select File, New in the usual way

and then the HTML document template which has been automatically installed by the setup program. The styles available are the standard HTML ones and are selected in the normal manner within Word.

To create a hypertext link within a document, you first define the text you want to jump to when the link is activated by defining it as a bookmark. You then highlight the text you want to form the link, click on the 'link' icon and select the name of the bookmark you want to jump to. When you've clicked on the OK button the text appears underlined in blue and the link is active.

Creating a link to an external document is as easy. Click on the link icon and then enter either the file name if it's local or the URL.

There's also a button you can click which lets you view the HTML tags.

The second facility that comes with Internet

PATHWAY ACCESS FOR MACINTOSH 3.0

One-piece email, FTP, Telnet and news...



ollongong Pathway
Access provides a
wide range of
communications facilities
handy for the Internet.

For starters there are two terminal emulators: TN3270 and VT (100 to 340). An FTP client and server application are also supplied.

There's also printer management software which will let your Mac act as a gateway between Unix workstations and Apple printers and let you print out to Unix (LPR-based) printers. The final utility is a fully-featured email package.

The main applications you would want to use on

the Net are the VT terminal emulator for establishing Telnet sessions to remote computers, the FTP client to download files and the mail software for email and for accessing newsgroups.

Installation is simple but configuration isn't. Your first job is to configure MacTCP and the PPP connection – rarely a straightforward task.

I dialled up Demon and first tried out the FTP client software. Once you've 'opened' the host you're presented with a standard Macintosh file copy dialogue box, with the contents of your local hard disk on the left hand side and those of

the FTP host on the right. You can navigate around the FTP host as if you're using a Macintosh. To copy a file you merely select it, confirm the file type – whether it's ASCII, MacBinary or Binary – and choose the copy option.

I also tried out Telnet-ing via VT220 terminal emulation and everything worked as expected.

The application that will interest most people is the combined email and newsreader. This allows you to send and receive mail, build address books and then store received mail in folders.

Automatic support for UUencoded files is provided. However, it doesn't support the MIME extensions. The newsgroups, meanwhile, are accessed from within the mail application, so posting to a newsgroup is just like sending an email.

Without doubt this is a stable product. I would freely recommend it to

Word users

Assistant is the ability to browse the Web from within Word. Each Web page appears as a Word document, so you can easily cut, paste and save pages and hypertext links.

With Internet Assistant, anyone can take an existing Word document and convert it into HTML in under a minute. However, having the tools doesn't make everyone great page layout artists, so be prepared for more badly designed pages appearing on a Web site near you.

John Elliott

Review in brief

INTERNET ASSISTANT FOR WORD 6.0 -PRICE INAPPLICABLE

Pro: Very user-friendly – you can create complete Web pages in minutes and you can browse in Word.

Con: Everyone will be doing it now...

Contact: Microsoft Tel: 01734 270 001 Email: Info@microsoft.com

QUARTERDECK MOSAIC 1.0

Multiple windows from Web browser



f the three Internet products Quarterdeck is currently working on, Quarterdeck Mosaic, the Web browser, is closest to commercial availability.

And the giant, economysized button bar makes it immediately clear that this is no ordinary browser.

For starters it benefits from a 'multi-threading data engine' that is claimed to speed everything up. Of course dragging graphics off some distant server isn't any quicker than with Netscape but there are a few tricks that even the mighty Netscape ignores.

Chief among these are multiple document windows. Other browsers restrict you to a single window with a single document but Quarterdeck's Mosaic can display several documents at the same time. Just what a dedicated Windows user ordered.

The high performance (but as yet unquantifiable) retrieval engine lets you fetch and display multiple documents at a time. This means you can do more in a given session – a boon when you're downloading big graphics files.

Drag-and-drop interface features save a lot of fiddly typing. When you stumble upon an interesting site, you merely drag and drop the document to the File Cabinet (the hotlist). All you do is click on and hold down the left mouse button in the grey area just outside the document, and then drag it to the File Cabinet. Voila!

The File Cabinet itself is a well organised appendage to Mosaic, bringing the ability to classify your Web finds according to your own folder scheme. There's a bunch of stuff already inside waiting for discovery.

Quarterdeck's Mosaic is nice but none of the extras are critical. With all the excellent freeware on the market, it will have a tough time getting users to put a value on its admittedly convenient features. If the freeware dries up, then Quarterdeck's Mosaic is worth a tumble when it leaves its beta status in the near future.

The Mosaic Release 1.0 is available in beta form at http://www.qdeck.com
Paul Lavin

Review in brief

QUARTERDECK MOSAIC 1.0 - TBC

Pro: Its multiple windows and drag-and-drop facility are a positive move towards user-friendliness.

Con: Unless you download this imperfect beta version, it'll cost ya.

Contact: Quarterdeck Tel: 01245 496699 Email: info@qdeck.co.uk

for a price

those who feel they have the relevant technical knowledge... if it weren't for the price.

A single user licence will cost £295, including MacTCP, or £195 without. But MacTCP comes standard with System 7.5... Wollongong says the support services it provides justify the price. As it is, the product is most suited for installation on corporate Mac networks. Reduced pricing is available for 100-user licences.

Review in brief

PATHWAY ACCESS FOR MACINTOSH 3.0 - £295 (INCLUDING MACTCP)

Pros: A well-integrated communications package.

Cons: Lacks MIME support and it's expensive.

Contact: Wollongong Tel: 01344 304242 Email: sales@twguk.com

TRICOM TRAVELLER 34

Magic speed for shackled notebooks



efore you can take advantage of a yet-tobecome-the-standard 28.8kbps modem, you have to ensure your computer can hack the pace. For desktop and PCMCIA notebooks this isn't an issue. Many external modems come bundled with a high-speed serial interface board and internal ones usually adapt within their own circuitry. If not, it's easy to install a 16500 UART card for under £30. But non-PCMCIA notebooks may not be upgradable, limiting serial speeds to 9.6kbps no matter what the modem.

However, the UK connectivity manufacturer Tricom has a unique, ingenious and ultimately nippier solution – use the parallel port for communication instead.

Tricom's 28.8 kbps
Traveller Fast can use either the serial or parallel port.
With notebooks this conveniently allows you to switch between ports so you can simultaneously use a parallel peripheral such as a printer, external sound module or a back-up drive.

Installation is remarkably easy. Tricom's PC drivers redirect the packets, effectively bypassing the serial port invisible to your applications. Removal is also simple – just click on the icon and choose the serial or parallel port. Once the port is redirected, it's unusable, so you still can't use a serial mouse.

I put the modem to the test on my Twinhead Series One 486 DX33 notebook – top speed in 1993 but burdened with a 8250 UART chip rendering it Internet-unfriendly, or so I had thought. Within ten minutes

of opening the box, I was zipping through the WWW.

The MNP10 error correction will continually assess line quality and adjust speed accordingly especially useful on cellular connections. To upgrade to V.34 will cost you £39 and software updates are available from the Tricom bulletin board for upload into flash memory. Other features include V.54 diagnostics, security password access and call back options and it comes bundled with Fax Lite Group 3 software.

Angus Kennedy

Review in brief

TRICOM TRAVELLER 34 - £599

Pro: Uses parallel port for communication and is handy for notebooks.

Con: The price.

Contact: Tricom Tel: 01494 483951 Fax: 01494 485213

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BUSINESS

The Internet Business Guide

The Internet Business Guide
Rosalind Resnick & Dave Taylor,
418pp, Sams Publishing, £22.95

Subtitled *Riding the Information*Superhighway to Profit, this book provides a comprehensive

round-up of the business that was being conducted on the Internet during 1994. The issues addressed by the authors include:

- Ways to use the Internet successfully to market your products and services
- How to create an Internet database, customer support centre and cyber-storefront
- Boosting sales, cutting costs and tracking down business leads by using the Internet
- Protecting your organisation from hackers, crackers and vandals
- How well businesses on the Internet have been doing



Internet UK, Ivan Pope, 298 pages, Paramount Publishing, £19.95

THE WHOLE INTERNET

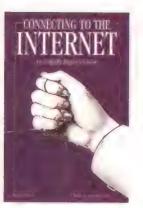
The Whole Internet User's Guide & Catalogue, Ed Krol, 558 pages, O'Reilly & Associates, £18.50

The first book all about the Internet from a non-US perspective. Ivan Pope is one of the true pioneers in this field in the UK, and his book offers a wide-ranging account of how the Internet scene has been developing. There's coverage of what some of the main access providers have to offer, together with lists of British-based Usenet groups and commercial domain names. One month's free Internet access from CityScape comes free with the book.

This is an absolute classic — and deservedly so. The second edition of *The Whole Internet Catalogue* has been updated to include sections about the use of modern Web browsers for storing and distributing information. It also includes updated coverage of multimedia email (MIME), Gopher, WAIS and Archie. There's also extensive coverage of what's legal, or at least tolerated, on the Internet, and what's not.



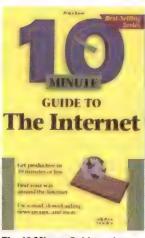
The Internet Starter Kit, Adam C Engst et al, 900+ pages, Hayden Books, £27.50



Connecting to the Internet, Susan Estrada, 176 pages, O'Reilly & Associates, £11.95

One of the classic doorstoppers, this book tells you almost all you're ever likely to want to know about the Internet, in two versions: one for Windows-based PCs, the other for Apple Macintosh computers. Unlike the more cerebral Unleashed, this is a very practical book that covers all the history and the 'how to' of all the main Internet services. Also included is a disk containing Internet utility software.

An alternative to the popular 10-Minute Guide. This book provides practical advice in a concise and carryable format. Topics include how the Internet works; understanding network performance; how to use the Internet; and how to use a network provider. It's US-biased, but a useful general introduction.



The 10 Minute Guide to the Internet, Peter Kent, 164 pages, Alpha Books, £9.95



The Internet Unleashed, Various authors, 1398 pages, Sams Publishing, £40.95

One of our most popular books, the 10-Minute Guide has been a big hit at the conferences and exhibitions we've attended. Low on page count, but extensive and concise, for once the publisher's blurb 'Get productive in 10 minutes or less' is a reasonable claim. Topics covered include: how to connect; sending and reading email; finding files; working with news; and listserv groups; and more.

The biggest of them all, Unleashed includes articles by all the Internet world's top movers and shakers. You'll never get it into your brief case, but you'll find it hard to ignore. It's impossible here to give even a flavour of its content, but suffice to say, it has contributions from every major Internet provider, including several from outside the UK. Also included is a disk containing Internet utility software.



The Internet Explorer Kit, Adam C Engst et al, 400+ pages, Hayden Books, £27.50

Sequel to The Starter Kit, this is also in Windows and Apple Macintosh editions. A slimmer volume, but still over 400 pages. the focus is much more on proper social behaviour on the Internet and how to set up your own web server and news groups. This also includes Internet utility software.

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Don't be afraid to ask, because this is where agony uncle Marc Nicholas answers your questions about the Internet. Send your queries to internet@computing.emap.co.uk

FEATURED FAQ&A

For an exstenive list of available FAQ files, point your Web browser at

THE COFFEE AND CAFFEINE FAQ

This group is dedicated to all beverages and products that contain caffeine; including tea, coffee, chocolate, mate, caffeinated soft drinks, caffeinated pills, coffee beans, etc.

Is it true that espresso has less caffeine than regular coffee?

Yes and no. An espresso cup has about as much caffeine as a cup of dark brew. But, servings for espresso are much smaller, which means that the content of caffeine per millilitre is much higher than with a regular brew. Moreover, caffeine is more quickly assimilated when taken in concentrated dosages, like an espresso cupful.

The myth of lower caffeine espresso comes

from the fact that the darker roast beans used for espresso do have less caffeine than regularly roasted beans. However, espresso is prepared using pressurized steam, which extracts a higher percentage of caffeine from the ground beans than regular drip.

Why should you never use percolators?
Percolators violate

most of the natural laws about brewing coffee.

Don't over-extract the oils and flavour. Never reheat or re-boil coffee. This destroys the flavour.

Violating these rules may not sound like much, but these are about the only rules there are. The effect of a percolator is to keep passing boiling water/coffee over the grounds until there is no flavour left.

How should I store my coffee for the best results?

One should store coffee beans in an air-tight, glass container. Air is coffee's main enemy. Glass is best, because it doesn't retain the odours of the beans or the oils, which could contaminate beans later stored in the same container. Room temperature is fine, if you plan to use the beans within a week. Otherwise, refrigerate or freeze them.

This prevents the chemical reactions that produce stale beans and lifeless coffee.

Written and maintained by Alejandro Lopez-Ortiz (alopezo@neumann. uwaterloo.ca).

The FAQ is also available at http://daisy.uwaterloo.ca /~alopezo/caffaq.html
Last updated 14/9/94

Version: 2.1 (This extract has been adapted for INTERNET)

called the Internet White Pages which lists names and addresses of people logged by a Usenet host in 1994. It's a good way of locating email addresses of people you know post news articles from time to time.

ORANGE AND PURPLE AND GREEN...

Can I change the colours and text formats of my Web

Mosaic and most other Web browsers allow you to do that. Look for a 'Preferences' menu item. In NetScape, go to the 'Options' menu item, select 'Preferences' and then the 'Styles' menu (see screen, right). This will allow you to change link colours, text style and font and even the toolbar style. Netscape allows users to tailor it to look any way they want it to.

EXTRA, EXTRA -USENET ON WWW

Can I read Usenet newsgroups using my Web browser? Yes! Mosaic and

Netscape are both equipped with the facilities to read Usenet postings. However you will need to identify an NNTP news server in your browser's 'Preferences' (find out the address from your Access provider).

Then use the URL news://[name of the newsgroup] (eg news. announce.newusers) to access the news files.

MUDDYING YOUR

I've heard about these things called MUDs. What are they, and how do I join?

A MUD is a Multi-User Dungeon. Think of it as a multi-user, Internet-based version of those text-only adventure games. MUDs are normally accessed via Telnet, except you use a different port number to the usual (23). For example, a

STOPPING THE FLOOD

I've subscribed to a list server, but now I realise I have too much mail! How do I get off?

List servers – closed mailing discussions on special topics – can be great sources of information. However, they can quickly pollute your mailbox, especially if your mailer doesn't support auto-filing or other mail filtering. Eudora on Macintosh and Windows, and Procmail under UNIX, can help keep your mailbox clean. Normally you get off a list

server by sending the word 'unsubscribe' as the first line of text in a message. If that doesn't work, send the word 'help' as the first word of a message and if the server is properly set up, you will be sent back some clues.

UNDERLINED QUERIES

Why are some of the words on WWW pages underlined?

Underlined words on Web sites are called Hyperlinks. When you click on them, you will be taken to further information on that topic.

WHITE PAGES FOR THE NET?

Is there a directory of all email addresses on the Internet?

There is no definitive way of finding email addresses for everyone on the Internet, because many of them are hidden within company networks. There are however, a few databases springing up, like Whois. If you have access to it, for example if you are a Cix user, this enables you to search on a name and return an email address.

Also, there is a book

MUD I play can be reached at unicom.org on port 3000. If you were Telnet-ing from UNIX you would type: #telnet unicom.org 3000

As you play a MUD you will gain more experience points, complete quests and eventually rise to the level of wizard. Upon entering this level, you are normally allowed to start creating areas of the game yourself. WARNING! MUDs can become very addictive :-)

TEXT TRYSTS

Why does the same Internet-derived text on a Macintosh look different on my PC?

Macintoshes require a linefeed and a carriage return at the end of a line of text, meaning that UNIX or PC ASCII needs to be read into the Macintosh as 'raw text'. Most word processors, like Microsoft Word, have facilities for this.

Another reason for differences is that word processor files, even from the same product on different platforms, are incompatible. However, you can normally find a function within your particular product that allows you to convert to and from other word processor file formats.

A PERSONAL ISSUE

How do I find out if a domain name has already been taken by somebody else?

There are a number of ways to do this.

If the name you want ends with .uk, you can ask your provider to check the root nameservers housed at EUnet. If it is available, your provider can then request it from the UK Naming Committee, which approves national domain names.

If you wish to register an .org, .com or .net domain, either use the Whois command in UNIX to determine if it is taken, or Telnet to rs.internic.net and run a search directly on the InterNIC database.

CAN THEY KEEP UP

I have a 28.8K (V.34) modem. Do all the access providers now support this speed?

Demon should have upgraded its modems to V.34 by Summer, as will most of the other major providers. Netkonect, U-Net and Easynet already support V.34.

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While local performance between your system and your provider – for instance, transferring email or news – will be better, you might not get any faster performance when accessing other sites. This is because there are a number of users fighting simultaneously for a fairly limited amount of bandwidth. So, don't be too surprised if your file transfers are still slow!

SPEED MACHINE BLUES

I just bought a new modem to replace my aging 2400bps. My problem is that the manual recommends setting the serial port speed to at least 38,400bps - but whenever I do that, I lose characters on the screen and Zmodem file transfers don't always work.

It sounds like you are suffering from a case of the 'PC UART Blues'. The original serial controllers (UART) in PCs were not designed to run at today's high speeds and did not buffer data, either.

Your machine probably has an 8250 UART which can't operate at more than 9600bps successfully. Ask your local PC dealer for a serial card which uses the fast, buffered 16550 or 16550A chip. The card shouldn't cost too much and it will help you get the most from your modem.

Alternatively, purchasing an internal modem card means that you will always get a suitable UART, as it is integrated.

V.SPECIAL PROBLEM

I purchased a US
Robotics Courier V.FC
modem a few months
ago. Unfortunately, the rest
of the world seems to
favour the V.34 standard!
Can I upgrade my modem to
V.34 and ensure some future
compatibility?

US Robotics and most other manufacturers who make V.Fast/V.FC modems offer an upgrade.

If you are lucky, your modem will be equipped with flash memory that allows you to load the upgrade into its internal memory from your computer. If you are unlucky, you will require a ROM chip swap or even a new main board. Both will require some downtime – the latter may involve you sending the modem back to the manufacturer.

Contact your reseller or the manufacturer to establish the situation.

UNIX FOR FREE?

Someone told me there was a free version of UNIX I could download off the Internet is this true? And where can I find it?

There is indeed a free version of UNIX available. In fact, there are three: Linux, FreeBSD and NetBSD.

You will need a minimum of a 386DX to run these operating systems, plus at least 4Mb of RAM. An X-Windows system is available to run with them, called XFree86, although

you are well advised to have at least 8Mb of RAM and a maths co-processor in your 386 or a 486 or Pentium machine to run it.

What exactly can you do with these free systems? Well, because they're all full UNIX operating systems they're a great way of learning UNIX at home.

For example, you could set up a machine running Linux or Free/NetBSD to dial in to a UUCP Internet provider and exchange mail and news articles during the night, when telephone costs are lower. Alternativley, you could use one of these machines at your company to serve as an inexpensive Web server.

Linux, NetBSD and FreeBSD are all available in the UK at the fabulous Imperial College FTP (ftp.doc.ic.ac.uk).

COLLEGIATE CONCERNS

My university offers dial-up access to its system, which is connected to the Internet. However, it only offers Unix shell access, and not SLIP or PPP. My first problem is that I want to be able to check my mail while logged into IRC. The second point is that I'd like to be able to use Mosaic.

Many Unix systems have a utility called 'Screen' installed which allows you to create 'virtual' sessions. If your system doesn't, bug your system administrator. It's free software from GNU, so they shouldn't have any trouble getting hold of it.

Once Screen is installed, dial up the university as you normally would. On entering your Unix session, type: # screen

After the welcome screen and the copyright message you will be back at a Unix prompt.

Typing control+a followed by the letter 'c' will create a new Unix shell.

To switch between them, type control+a followed by the space key.

You can leave IRC, or any other program, running in a screen window, and it won't die or halt when you go into another screen.

A novel way for you to get SLIP out of your university shell account is to use a shareware product called The Internet Adapter (TIA). This clever piece of software converts a humble shell account into a pseudo-SLIP account, amazing as that may seem! The only catch is that you have to shell out (excuse the pun) \$25 for the product. To find out more, point your Web browser at http://www. marketplace.com or ftp.marketplace.com or gopher.marketplace.com

However, check with your system administrator before going ahead. Some might disapprove of the utility being on the system.

I am trying to run
Netscape on my
Macintosh, but I keep
running out of memory. I
only have 4Mb built in, and I
don't want to pay more just
to get onto the Internet. Is
there anything I can do?

All Macintosh computers running System 7.0 or after have the ability to use virtual memory. This means you can use space on your hard disk as memory (RAM).

If you go to Control
Panels in the Apple Menu,
you will find Memory which
allows you to select this
function. I would suggest
setting it to at least 8Mb, but
remember that if you have
4Mb of memory at the
moment, this will take up
4Mb of disk space.

If you do not want to sacrifice your storage space, an alternative would be to use a different Web browser. MacWeb, for instance, runs in only 750k of memory, compared to Netscape's suggested 3Mb, and is available from ftp.red. net/mac/comms/www

LEGAL QUESTIONS AND ANSWERS

Paul Lavin, who has a doctorate in jurisprudence, guides business users of the Internet through a maze of legal problems

he Internet and the World Wide Web are full of copyright material being used or published by people other than the originator. What does the law say about the use of copyright material on the Net?

Copyright law protects originality in a person's (or company's) expression. The Copyright, Designs and Patents Act 1988 covers any literary, dramatic, artistic or musical work, broadcast, sound recording, film, photo or typographical arrangement.

While the Act doesn't specifically include materials sent zooming around the Internet in email, binary files or as World Wide Web pages, it is safe to assume that it will be extended to them in due course. Clearly, at some point, our overworked legislators in Westminster or Brussels will have to address the unique characteristics of the Internet. Don't hold your breath, though.

For something to become copyrighted, it must be an original and substantial work. The courts have held that some work or effort must have gone into creating the material, but even the selection and arrangement of material which is not under copyright can give rights to an originator or publisher.

Once authors assert their copyright, it is enduring. In the UK, it lasts for 50 years after the end of the year of first publication. If copyright is violated, injunctive relief and civil damages can be granted or criminal prosecution can result. The first two are likely for small breaches, the last is usually reserved for commercial copyright theft.

Copyright can be contracted away. An author is often required by the terms of a contract of employment to assign it. Copyright material may

also be published under licence, the terms to be agreed by the parties.

When publishing your company's Web pages, make sure you own, or are licensed to use, any text or images you incorporate. Note that freelance photographers retain copyright to any photographs they take. unless there is agreement to the contrary. Shots taken for the annual report should not be republished on the Web without subsequent agreement, unless all rights were secured originally.

If you want to link to another company's Web

It's the jurisdictional wrangles that make Internet copyright thieves think they are above the law

pages, the copyright of material on those pages is not your concern. The liability for violation of copyright lies with the publisher - in this instance, the entity that put the material on the Web. Linking in does not make you any more liable than writing about a book which contains purloined material.

Of course, the Internet presents other copyright complications. Although there are plans to harmonise European intellectual property laws, they still differ from country to country at present. Furthermore, even if a book is protected by copyright, the authorities might not be so diligent in prosecuting unauthorised online use of its contents.

It's the jurisdictional wrangles that make Internet copyright thieves think they are above the law. If a picture is taken from a copyrighted American source, placed on Usenet in Holland, downloaded to a news server in the UK and then retrieved in France, who is going to chase whom? And where? For small, infrequent violations, it rarely makes sense to pursue matters.

Larger publishers have been known to warn persistent offenders. There are many tales about Playboy's lawyers having a word with posters to the alt.binaries.pictures.etc newsgroup, if their posting activities are excessive. However, there is no known instance of a prosecution, undoubtedly for the reasons above.

When mass copyright violations occur against substantial commercial interests (like stolen applications or stolen program binaries), the copyright holder will attempt to act, either alone or in concert with organisations like FAST (Federation Against Software Theft), to squash the offenders like bugs.

While there is only a slim risk of being sued for minor misuse of copyright materials, companies which are using the WWW as a marketing vehicle can scarcely afford the opprobrium that would come their way if they were seen to be flouting copyright conventions.

As in most legal matters, an ounce of prevention is worth a pound of cure. When you commission work, make sure that you use written contracts assigning the appropriate rights to your company for the duration of your use. Any future questions can be resolved by negotiating an 'all rights' deal. It might cost more to secure all rights, and written contracts are more hassle than a handshake. Nevertheless, they are worth it as litigation insurance.

Get connected with INTERNET Magazine

It's time to stop making excuses about why you're not on the Internet. Especially the one about not having a modem. INTERNET Magazine has teamed up with modem maker Andest to bring you a bundle of ALL you'll need to get started on the information superhighway.

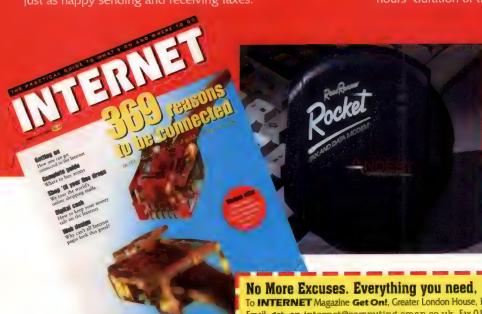
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they often didn't include the serial cable you need to connect it to your PC. This one does.

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Offer applies in **UK only**. Please allow up to 28 days for delivery, direct from Andest although we expect you'll receive your

Get On! Bundle well within that time.

Glossary

Acronyms abound and the terminology can be confusing, but THE INTERNET GLOSSARY makes sense of it all



ACCESS PROVIDER

A company that sells Internet connections to people. Also known as an IAP (Internet access provider). It typically buys its Internet connection from one of the members of CIX, installs its own news, mail, FTP and Web servers and distributes the necessary software to its users.

ANONYMOUS FTP

When you connect to a computer on the Internet to download a file, you usually use File Transfer Protocol (FTP). With anonymous FTP you don't have to be recognised by the system you're contacting – you just log in anonymously. Most of the time you'll see the instruction 'You can get this file by anonymous FTP from ftp.microsoft.com.' When you log in, type 'anonymous' as your name and give your email address as the password, if one is required.

ASCII

American Standard Code for Information Interchange — a language understood by all computers which encodes numbers and the basic text characters. For example, the number 65 represents the character A. To use FTP successfully you have to know if you're transferring ASCII or binary files.

API

Application to Program Interface – software which enables two pieces of otherwise incompatible software to communicate with each other.

ARCHIE

A host-based program which searches for files stored on countless
Anonymous FTP sites across the Internet. Access Archie by sending an email to the main Archie server, archie@archie.mcgill.ca with 'help' as the subject, and you'll receive a user guide by return mail.
Alternatively there's a WWW interface to Archie at http://web.doc.ic.ac.uk/archieplexform.html

APPLELINK

A BBS operated by Apple for users of Macintoshes. You can send mail to AppleLink users by addressing it to username@applelink.apple.com

APPLETALK

The communications protocol invented by Apple, built into every Mac and used exclusively on Macintosh networks.

ASYNCHRONOUS

One of the ways that communications devices talk to each other – data is transmitted one bit at a time and the

start and finish of each byte is marked by an additional bit. In this way the receiving computer can distinguish each byte received. When you dial into the Internet using a modem it will be communicating asynchronously.



BACKBONE

The central section of a network to which other networks connect. If data needs to travel from one network to another it will go over a backbone. In the Internet the backbones are the high-speed data connections that join together the main access providers and government or educational sites.

BAUD RATE

The speed rate of a data channel – expressed as bits per second (bps) – which is usually used when referring to modem speeds.

BBS

Bulletin Board System – the electronic equivalent of the office pinboard which typically runs on a single computer with lots of modems hooked up to it. Users dial into it to leave messages and files which can then be read by other people dialing in.

BINARY

This means counting with just zeros and ones. It's used a lot in computing because it's how computers work internally. The most common place you'll see it on the Internet is in reference to file types — which are either binary or ASCII. An ASCII file contains seven-bit bytes whereas a binary file contains eight-bit bytes. It's important to know which format a file is in because some systems can only deal with ASCII.

BITS AND BYTES

The very stuff of computing — a bit is the smallest piece of information that a computer deals with — either a zero or a one. The word bit comes from Binary digIT. Bytes are a collection of bits and usually come in the form of seven-bit bytes and eight-bit bytes.

BRIDGE

This is a device that connects two networks together. It simply concerns itself with the physical address of the packet, not with network protocols. It receives a packet of data from one network and then, based on the packet's physical address, forwards it to the other network or discards it.

BROADCAST

This is a system which distributes a copy of specified packets to all hosts on a network. You can imagine that if just a few computers on the Internet started to broadcast then the Internet

would grind to a halt, so if a computer tries this trick, routers in the Net stop the broadcast from going any further.

BROWSER

A program which allows your computer to download and display documents from the World Wide Web. Some browsers can also FTP and read Usenet postings. Popular browsers include Mosaic and Netscape.



CCITT

International Consultative Committee for Telegraphy and Telephony – the organisation, now evolved into the ITU-T, which sets worldwide telecommunications standards.

CIX

Commercial Internet Exchange is the network of the major commercial Internet providers which was originally established so that commercial Internet traffic could bypass the NSFnet. It's responsible for a large part of the Internet's backbone.

Compulink Information Exchange is a major UK BBS. You can address mail to CIX users from the Internet by using the address username@compulink.cix.co.uk.

CLIENT

This is a generic term referring to programs which work across networks. COMPUSERVE

A large international BBS with partial access to the Internet – you can send email to CompuServe users by relacing the comma in their address with a full stop and addressing to the host compuserve.com, eg 7110.12345@compuserve.com

CYBERIA

The UK's first cybercafe where you can mix connectivity with coffee.



DIALUP

This means using telephone lines or ISDN networks to connect your computer to a service. The opposite of a permanent connection, it means you have to make a phone call to get online.

DNS

Domain Name Service – this is a system at your access provider which translates between Internet names in the format www.ema.p.com to the dotted decimal notation format.

DEFAULT GATEWAY

When you configure your software to access the Internet the default gateway is the IP address that's required. This is the IP address of a router at your IAP which your software

will send packets to, so it can send them onto the right hosts. If you find that you can access all of the hosts at your IAP but nothing else in the world, then it's probably because the default gateway is set wrongly in your software, or because the router that forms the gateway is not working.

DEMON

A UK-based Internet access provider.

DOMAIN

The part of the Internet name that specifies your computer's location in the world is written as a series of names separated by full stops. The domain name at INTERNET is computing.emap.co.uk. This shows we're in the computing section of Emap which is a company in the UK.

DOTTED-DECIMAL NOTATION

IP addresses are 32 bits long and pretty unmemorable in that form, so they are translated into decimal, split into four sections and divided by full stops, eg 158.152.61.100. This is the standard form of nomenclature used for all IP addresses. When you sign up with an Internet access provider you'll be allocated an IP address for your computer.



EMAIL ADDRESS

This is a unique address within the Internet which lets people send mail to you. It comprises your name, the @ symbol and your domain name, so the address neile@computing. emap.co.uk is the address for the user Neil Ellul at the domain computing.emap.co.uk

ETHERNET

One of the most popular lan networking systems, capable of supporting data transfer at 10 Mbits per second. Most of the lans on the Internet are based on Ethernet.

EUNET

A UK Internet access provider.



FAQ

Frequently Asked Questions — the role of the FAQ document, which is commonly found in newsgroups, is to collate answers to the questions asked most commonly by newcomers. It prevents the same old questions being asked in newsgroups week after week. There's a comprehensive repository of FAQs available by FTP from ftp://src.doc.ic.ac.uk/usenet/news-info/

FLAME

An inflammatory, often offensive message. If you read something that gets your goat and you've just got to reply, then hang fire for half an hour; immediate replies often make the most unreasonable flames.

FIDONET

A long-established network of BBSs. FINGER

A way of eliciting an automatic response — set by the site owner — from a site on the Internet. It's often written as an extended signature file.

FIREWALL

A security system designed to restrict access to the computers on a lan from

the outside world, which usually means the Internet.

File Transfer Protocol is the basic way of transferring files across the Internet, If you want to get files from another computer then you'll need an FTP client (available as shareware or there's one built into most WWW browsers). See Anonymous FTP for more details.



GATEWAY

This is a device that translates data between two different systems on a network. Gateways are usually shared between many users on a lan and give access to central resources.

A way of compressing and storing images used extensively on the Net.

COPHER

A search facility developed to make the Internet easier to use, Gopher employs a menu-driven front-end to read documents and download files stored on hosts. To use it you need a Gopher client running on your computer and the host must be running a Gopher server application. Most Web browsers now incorporate a Gopher client.



HTML

HyperText Mark-up Language - this is the language used to create documents on the World Wide Web.

HTTP

Hypertext Transfer Protocol the standard way of transferring HTML-encoded documents between Web servers and clients (browsers). A computer acting as a Web server is often referred to as an HTTP server.

The computer you contact to get on the Internet - each host has an IP address and a fully qualified Internet name. Mymac.computing.emap.co.uk is the host name for the computer called mymac in the domain computing.emap.co.uk

HOST FILE

This is a file on your computer that defines the relationships between domain names and IP addresses. It's used when you have no access to a domain name server so that you can still refer to a host by its name rather than its numerical address.



IAB

The Internet Activities Board the technical body that oversees the development of the communications and networking protocols used on the Internet. It consists of representatives from all manner of institutions, including equipment manufacturers.

The Institute of Electrical Engineers a UK-based professional and standards body.

The Institute of Electrical and Electronics Engineers - an

important US-based professional and standards body.

The Internet Engineering Steering Group - the executive committee of the IETF.

Of the task forces of the IAB the Internet Engineering Task Force is the most important technically, and is charged with developing technical solutions to overcome any problems.

INTERNET

If not capitalised, this generally means a collection of networks and is really a lazy way of saying 'internetwork'.

INTERNET

With the first letter capitalised it means the worldwide Internet (often shortened to the Net).

Internet Protocol is one layer of the set of protocols that devices on the Internet use to communicate with each other. It defines how packets of data get from their source to their intended destination. You'll often see it written in conjunction with the other major protocol - Transmission Control Protocol - as TCP/IP.

IP ADDRESS

Every computer connected to the Internet has to have an address. Confusingly, this is expressed in two ways: as an IP address in dotted decimal notation, eg 158.152.34.2, or by the more memorable machine and domain name, eg neile@ computing.emap.co.uk. Within the mechanics of the Internet itself the dotted decimal version, ie the IP address, is the format which is used.

IPNG

The Internet Protocol New Generation - it's not that IP doesn't work, but the current 32-bit IP addressing scheme will soon be unable to cope with the increasing number of computers on the Net, IPNG consists of 128 bits so it will allow for a quadrillion addresses on a trillion networks. However, it's not yet fully defined and is still the subject of IETF working parties.

Internetwork Packet Exchange a network protocol invented by Novell that's used on NetWare lans. It performs the same function as IP.

Internet Relay Chat - often described as CB for the Internet – is a system where you can chat (ie type) to other users in real time. You need an IRC client on your computer and your access provider must have a server that supports the protocols used.

An Integrated Services Digital Network allows you to send digital information at speeds of 128Kb over the normal telephone network. Just like a telephone call, you dial the number of the computer you're calling and establish a digital connection. It takes only milliseconds and the cost is the same as a normal telephone call.

150

The International Organisation for Standardisation - an international standards body that ratifies standards produced by other organisations such as the IEEE and ITU-T.

An Internet service provider, which is the same as an access provider.

ITU-T

An international standards organisation that develops and ratifies all the world telecommunications standards. It contains representatives from all the major PTTs.



JPEG

This is a way of compressing still images and video which is widely used on the Internet.



KERMIT

A popular error-correcting file transfer protocol, primarily used on BBSs.

KILL FILE

A file in which you can specify the email addresses of users whose mail and posts you don't want to read. Your newsreader will look at the names in the file and delete messages from those users you've specified.

KILOSTREAM

This is the name given by BT to 64Kb leased lines for carrying data. A 64Kbit leased line can carry the equivalent of four normal modem transmissions. Your Internet access provider will usually employ 64Kbit lines between its various POPs and its central site.



LAN

Local area network - a group of computers connected together to form a network. Lans can be very large and spread across a number of buildings.

LEASED LINE

A dedicated telecommunications connection between two points, usually provided by a PTT.



MAIL GATEWAY

This is a computer that translates mail between different mail systems. It works out where the important bits (eq subject, author, recipient) are in the message and translates the lot into the format required by the other system There are mail gateways on the Internet between lan mail systems (such as Lotus' cc:Mail) and the Internet, which uses SMTP, and also at your access provider, where the mail gateway stores mail for you and sends it to you when you connect.

MYRROR

Some anonymous FTP sites are so heavily used that their entire contents are copied to, and made available from, other sites, to relieve the load. These are known as mirror sites

MODEM

This stands for MOdulator / DEModulator - a device that translates the digital information your computer produces into analogue signals that can be sent down normal telephone lines. Modem specifications primarily refer to the speed at which they can communicate, generally given in terms of the V-series.

MULTICAST

A special type of broadcast destined for a subset of hosts on a network.

MOSAIC

Mosaic, the first browser, was produced by the National Centre for Supercomputing in America (NCSA), and really started the growth in popularity of the Web.



NETSCAPE

A second generation Web browser.

NAME RESOLUTION

The process undertaken by DNS in turning text Internet names, eg neile@computing.emap.co.uk, into IP addresses.

NAME SERVER

A host that provides a DNS service to translate between hosts' names and their IP addresses.

NIC

Network Interface Card - the card inside your PC which allows it to talk to a specific network.

NIC

This stands for Network Information Centre. In the early days of the Internet this was the central site which maintained IP addresses and domain names. Nowadays there are NICs scattered throughout the world.

Network Management Station a computer which monitors how all the nodes on the network are performing.

Usually located at your access provider, the people in the Network Operations Centre monitor the network for faults, respond to user support calls and rectify problems.

NODE

Any device connected to the Internet - most are hosts but 'node' also encompasses bridges, routers, gateways and the like. Anything with an IP address is a node.

NEWSGROUP

These are the Internet's bulletin boards. There are (at the latest count) around 14,000 groups covering every subject under the sun. Most IAPs and organisations have a newsgroup server which periodically receives a feed of news from another newsgroup server on the network - it takes all new messages from the feed and then adds the messages which have been posted by its own users. The feed then goes onto another newsgroup server. The collective name for these newsgroup servers is the Usenet. To access the newsgroups stored on your access provider's newsgroup server you need a newsreader program.

Network News Transfer Protocol the protocol used between news servers to exchange articles. Also the protocol used between a newsreader program and a newsgroup server.



Open Systems Interconnect an international standard designed to facilitate communications between computers of all types and makes.

PACKET

A bundle of data that traverses a network. On the Internet a packet is formed by the IP part of the TCP/IP protocol. It must contain the source address (where the packet's come from), the destination address (where it's going), a packet identifier (so that the receiving computer can tell what sort of packet it is) and some data.

PING

This is a program that uses the TCP/IP protocol to send a message to a host's network interface to see if it exists. It's useful for network troubleshooting.

Point of Presence - a local Internet access point set up by an access provider to reduce the telephone charges for people dialing in.

POP3

An email transfer protocol.

PORT

The term used to define different points of entry used for different types of data going into a single computer. eg port number 23 may be specified for Telnet access and port 21 for FTP. Nowadays most software determines port numbers automatically. Port is also the term for a physical input/output socket on any computer.

Point to Point Protocol - a protocol that allows IP connections between two devices over both synchronous and asynchronous communications circuits. It's either used in router-torouter or host-to-network communications. If you dial up your Internet access provider you'll most likely be using a PPP connection or the protocol it superseded, SLIP.

PROTOCOL

Essentially an agreed way for two devices on a network to communicate with each other. It defines many issues including packet format, how it is verified, how routers deal with it, and what to do if a packet goes missing.

PSTN

The Public Switched Telephone Network - more commonly known as the telephone system.

Poste de Telephony and Telegraph the internationally accepted acronym referring to the operators of public telephone systems around the world, eg BT and Mercury.



A dumb piece of internetworking equipment, this merely amplifies the signal it gets from a network and re-transmits it to all the other pieces of network that are connected to it.

ROUTER

A clever piece of internetworking equipment. Routers connect all the networks that comprise the Internet together and exchange packets between them. They can also work out the quickest and cheapest way to get a packet to its destination.

Request for Comment - a document, usually put out by one of the working groups of the IETF to elicit responses from other interested parties or to formally define a technology. There's a comprehensive catalogue of all RFCs available by FTP at ftp://src.doc.ic.ak.uk/rfc



SERVER

A central computer which makes services and data available.

SHELL

A 'base level' software program such as MS-DOS, designed to allow a person to interact with a computer. However, in the Internet world it most commonly refers to the user/machine interface program on Unix machines.

SIGNATURE FILE

A message - usually intended to be humorous - which you can add automatically to the end of your email messages or newsgroup posts.

Serial Line Internet Protocol - a protocol that allows devices to use IP over asynchronous and synchronous communications links. It is now being superseded by PPP.

SMILLES

Punctuation that you see in newsgroup posts and emails which, viewed sideways-on, appends human concepts to your messages, eq happiness/irony :-), sadness :-(and astonishment :- o

Simple Mail Transfer Protocol - the Internet protocol for transferring mail.

SPAM

Slang for posting the same message to multiple newsgroups - frowned upon.

SYNCHRONOUS

A description of how two communications devices agree on how they'll exchange data. Asynchronous communication is more efficient.



Not the famed Arnie movie but the way Americans define the speed of a particular type of leased line. You come across this when an access provider claims to have a T1 link to the States. What it means is that it has a 1.5 Mbit connection, which is the equivalent of 25 64kbit connections or Kilostreams. Think of this in terms of how many normal modem conversations the link will support; your normal modem transfers data at 14,400bps so you'll get four of them on a 64,000 bps link and 100 on a T1 link.

Transmission Control Protocol the major protocol in the suite of Internet protocols. It takes the information to be transmitted by the application and passes it to the IP to be transmitted. Where IP is responsible for getting a packet from one host to another, TCP is responsible for ensuring that messages get from one host to another and that the messages are understood.

TELNET

This is the protocol that allows you to connect your computer over the Internet to a host computer and look like you're a dumb terminal to that host. It once made up the majority of Internet traffic but has been superseded by the WWW. However, there are still some good Telnet sites; try NASA, Along with Telnet you need terminal emulator software (either VT or TN3270) which turns your computer into an (almost) blank screen.

TETP

Trivial File Transfer Protocol - a cutdown version of FTP, used when a host needs to automatically download a file from another host on the network.

TOKEN RING

A lan networking system developed by IBM which is based on a ring topology. Token ring networks can transfer data at 16Mb and are constructed using both shielded and unshielded twisted pair cables.

TRANSCEIVER

Physical devices that connect a host to a lan, transceivers are often built into the network interface card or they may be an external unit you plug into a socket on a network interface.

TRUMPET

A Winsock-compatible Windows program that provides a dialup connection to the Internet based on Serial Line Internet Protocol (SLIP).

TERMINATOR

Back to Arnie again, only this time the terminator is the little cap that has to be physically stuck onto the end of a thick or thin Ethernet network to make sure the packets don't fall off the end. Terminators look like little silver tophats and without them your network simply won't go.



UUCP

Unix-to-Unix Copy Program - this allows one Unix-based host to copy files from (or to) another Unix-based host. This program was originally the way the newsgroup feeds were propagated throughout the Internet.

A host operating system developed by AT&T that allows multiple clients to access the resources of one host simultaneously. Many of the news, mail, Web and name servers on the Internet use this operating system.



VERONICA

This stands for Very Easy Rodent-Oriented Net-wide Index to Computerized Archives - it is essentially a catalogue of gopher sites in the world which allows you to search for menu items that contain a keyword and which then builds a menu of those sites. You can access Veronica at gopher:// gopher.scs.unr.edu

V-SERIES

A series of mainly modemorientated specifications, as issued by the CCITT, which governs the speed of modems and whether or not they offer compression of data.



Wide Area Information Server an information retrieval system developed by Apple, Thinking-Machines and Dow Jones. It allows a client to perform keyword searches simultaneously on multiple online databases.

WAN

Wide Area Network - a network of computers that involves communications links between several networks. A wan usually consists of a number of interconnected lans.

WINSOCK

A standard interface within the Windows operating system which sits between applications and the networking protocols. If you want to access the Internet from within Windows you'll need a program called Winsock.DLL loaded into your Windows environment. However, it's one of the most common causes of problems as not all software works with the same version of Winsock.

www

World Wide Web - also known as the Web - this is the generic name given to all of the hypertext-based HTML documents on the Internet that have links to each other and are accessible from HTTP or Web servers.



A CCITT-defined standard for communications devices to access the public packet-switched network, which is like a digital postal network. An X.25 device formats data into a packet and the X.25 network takes care of delivering that packet to a specified destination address. The largest X.25 network in the UK is used by the government and all those National Lottery terminals.

X 400

An open standard for electronic mail systems defined by the ITU-T and the OSI standard.

X.500

The specification for directory services for X.400.

X-MODEM

A protocol used to transfer files between two computers, usually with modems.



Y-MODEM

Another protocol used to transfer files between two computers, again primarily through modems.



Z-MODEM

Yet another protocol used to transfer files between two computers, yet again, primarily through modems.

ZOIKS!

Can't find a definition? Then you could try the largest online glossary of computer terms on the Web, which is at http://wombat.doc.ic.ac.uk

NTERNET

The

Access provider guide

Don't sign up for any Internet access services until you've consulted the comprehensive buyers' index which follows

nce you have made the decision to get connected to the Internet, you then have to decide how you want to go about it. How To Get Connected (see page 56) should give you the basics, but one of your priorities is to work out how much you are willing to pay and what you want to do with your connection.

To help with that, here is our Access Providers Guide. It lists all the UK's Internet providers, together with their locations and the services they offer.

To make it even easier to use, we've split the information into three separate sections.

The first section – Who They Are – gives you contact details for each of the providers. We'll be adding to this list each month as new providers appear. If you already have access but are looking to change providers, the WWW addresses are a useful source of additional information.

The Where They Are chart lets you see at-a-glance which providers have a Point of Presence (POP) near you. This is obviously an important factor, as you should only be making a local telephone call from your premises to the Internet. In the UK particularly, users justifiably worry about running up enormous telephone bills, so make sure you are paying the minimum possible.

Then What They Offer gives a breakdown of the individual services offered. Many providers have more than one service, so we have tried to list as many of the variations as possible.

Make sure you talk to several providers and find out what they recommend for your situation before parting with any money.

As a final step, go through the checklist at the foot of the next two pages.

The information is divided into the following columns: Company name: This is the trading name of the company that runs the Internet access service, not the name of the service that company supplies, although sometimes this is the same thing.

Telephone number: The

number each company prefers to use for sales enquiries. Email address: The address each company prefers to use for sales enquiries.

Web page: If the service provider has a page on the World Wide Web, this is where to find it.

Points of Presence: This chart is crucial if you want to keep the cost of your access to a minimum. It shows the places in the UK where

providers offer local access. Some charge for their more remote POPs, so check if you have to to pay an excess. Service name: The actual service name, which often differs differs from the company name. Start-up cost: This is a oneoff charge paid when a user subscribes to the service. Ongoing costs: This is the monthly or yearly charge paid for subscription to the service. We have tried to put both where possible - it is often cheaper to pay for annually. Type of connection: This is an important entry, because it shows which providers are offering direct Internet access (IP), those that are offering bulletin board services (BBS), and those offering email and/or Usenet only (UUCP). Most companies supplying

to full IP connection. Access medium: This indicates which access methods are supported by the particular service dialup modem, ISDN, leased line or X.25. Aimed at: This entry indicates at whom the company is aiming a particular service - home users (h), small businesses (s) or large corporates (I). Services available: Largely irrelevant for full IP connection, as the applications themselves are all available irrespective of the provider. For shell or BBS accounts, though, each service is offered at the discretion of the provider. **Details of service:** Additional information you may find helpful when deciding which provider to talk to first.

Access providers should send up-to-date information about their services to: providers@computing. emap.co.uk

CHOOSING YOUR

One of the most difficult decisions you will have to make at the outset is what you would like your email address to be. The problem is that until you have used email for a while you won't know what constitutes a good address. It's a bit like having to choose clothes for a wedding without having tried them on!

Once you have chosen an address it is very difficult to change it without incurring cost. Some providers will even charge you for changing your mind as soon as your first choice has been entered into their database.

A good service provider will help you make the decision when you sign up, but be sure to make a list of possibilities for your preferred address before you give any other details.

It is worth noting that the address you pick will often be the only indication that other users get of who you are.

UUCP offer an upgrade path

The most important point to bear in mind is that it represents you or your company. Keep it short and, above all, memorable.

For instance, if your name is Nick Dudley and you work at Oakland Elevators, you might choose the address dudley@oakland.co.uk, or maybe nickd@oakele.co.uk

Many people use the convention of splitting up words before the @ symbol with full stops, ie Nick. Dudley@oakland.co.uk. Although this is quite common, it makes the address too long and prone to error. Any sort of delimiter, like a full stop, a dash or an underscore, should be avoided if at all possible, as other users

invariably forget it, with the result that your mail bounces.

The last part of the address (ie .co.uk) will probably be set by the provider, unless you pay extra, so it is the front elements you need to consider. Also with some services you do not have to specify the naming information before the @ symbol (ie dudley), as this will depend on the routing within your building. However, if you decide at a later date that your domain name (oakland.co.uk) is inappropriate, it will cost money to change it.

one final point – when giving out your email address make sure you spell it out letter by letter. It really does defeat the object of instant, time-independent communications, if people have to keep telephoning you to check out your email address.

Who they are - Access providers' contact details

$N_{am_{\Theta}}$	Telephone	Emaii add	Web page
Almac	01324 666336	alastair.mcintyre@almac.co.uk	www.almac.co.uk
Atlas	0171 312 0400	info@atlas.co.uk	www.atlas.co.uk
BBC Networking Club	0181 576 7799	info@bbene.org.uk	www.bbcnc.org.uk
BTnet	01442 295828	adrian edwards@bt.net	www.bt.net
Byson Computers	01635 869480	Ian@Byson.demon.co.uk	www.hiway.co.uk/~byson/
Celtic Internet Services	01633 815550	enquiries@celtic.co.uk	-
CityScape Internet Services Ltd	01223 566950	sales@cityscape.co.uk	www.cityscape.uk
CIX	01492 641961	cixadmin@cix.compulink.co.uk	www.compulink.co.uk
Compuserve	01800 289378	70006.101@compuserve.com	100 · · ·
Delphi Internet	0171 757 7080	ukservice@delphi.com	www.delpi.com
Demon Internet	0181 371 1234	sales@demon.net	www.demon.co.uk
Dungeon Network Systems	01366 383047	info@dungeon.com	www.dungeon.com/
Easynet	0171 209 0990	admin@easynet.co.uk	www.easynet.co.uk
ElectricMail	01223 420193	info@elmail.co.uk	www.elmail.co.uk
EUnet GB	01227 266466	sales@Britain.EU.net	www.britain.eu.net
ExNet Systems	0181 244 0077	info@exnet.co.uk	
Foremost Training	0141 248 6377	donald@scotnet.co.uk	
Frontier Internet Services	0171 242 3383	infor@ftech.co.uk	www.ftech.co.uk
Genesis Project	01232 231622	sales@gpl.com	www.gpl.net
Greenet	0171 713 1941	support@gn.apc.org	
Leaf Distribution	01256 707777	sales@leaf.co.uk	_
Lunatech Research	01734 791900	infor@luna.co.uk	www.luna.co.uk
MacLine	0181 401 1111	orders@macline.co.uk	www.athena.atlas.co.uk/macline.htm
Manx Computer Bureau	01624 623841	-	na.
Mari Computer Systems	0191 402 0191	sjt@mari.co.uk	-
MKBBS	01908 345780	sysop@mkbbs.co.uk	and the second s
NetKonect	0171 345 7777	infor@netkonect.co.uk	-
On-Line Entertainment	0181 558 6114	mike@mail.on-line.co.uk	-
Paragon Software	01635 861111	paragon@parasoft.co.uk	
Pavilion Internet plc	01273 607072	info@pavilion.co.uk	www.pavilion.co.uk
PC User Group	0181 863 1191	info@win-uk.net	www.ibmpcug.co.uk
Pipex	01223 250120	sales@pipex.net	www.ws.pipex.com
Poptel	0171 249 2948	admin@mcrl.poptel.org.uk	www.poptel.org.uk
RedNet	01494 513 333	info@red.net	www.rednet.co.uk
Research Machines	01235 826000	tclark@rmplc.co.uk	www.rmplc.co.uk
The Direct Connection	0181 317 0100	helpdesk@dircon.co.uk	www.dircon.co.uk/index.html
The Internet in Nottingham	0115 956 2222	info@innotts.co.uk	www.innotts.co.uk
Total Connectivity Providers	01703 393392	sales@tcp.co.uk	www.tcp.co.uk
U-NET	01925 633144	hi@u-net.com	www.u-net.com/
Vossnet	01753 737800	info@vossnet.co.uk	www.vossnet.co.uk
Zynet	01392 426160	zynet@zynet.co.uk	www.zynet.co.uk/

Warning - Do make sure you've asked these following

- 1 Can you use the Internet for the price of a local call?
- 2 Does the provider offer 24-hour support and technical assistance?
- **3** Is the price inclusive or exclusive of VAT?
- 4 Are you paying a fixed charge each month or for usage based on time?

Where they are - Points of Presence near you

Abendan Abingdon Bellings Birmissian Birmissian Birsio Cambridge Canterbuy Coven	Downson, Douglas Edinburah Feter Faltin Gossov, Huji Me of Want	Leicester Libertoool London Manchester Merricut Nerricut	Swindow Warrigton Wolverfampton Name
			Almac
			Atlas
			BBC Networking Club
			BTnet
• • • •			Byson Computers
			Celtic Internet Services
• • •			Cityscape Internet Services
			CIX (GNS)
			Compuserve (GNS)
			Delphi Internet (GNS)
	• • • • •		Demon Internet
•			Dungeon Network Systems
• •			Easynet
·			Electric Mail
• • • • • • • • • • • • • • • • • • • •			EUnet GB
			ExNet Systems
	•		Foremost Training
			Frontier
• 4 1			Genesis Project
			GreenNet (GNS)
			Leaf Distribution
			Lunatech Research
			MacLine
			Manx
			Mari Computer Systems
			MKBBS
			NetKonect
			On-Line Entertainment
			Paragon Software
• • •		•	Pavilion Internet
·	• 0 0		PC User Group
			Pipex
production of the state of the			Poptel
			RedNet
			Research Machines
			The Direct Connection
			The Internet in Nottingham
		•	Total Connectivity Providers
		• . •	U-Net
			Vossnet
			Zynet

questions before you part with any hard-earned cash

- **5** Can the provider support your specific modem?
- 6 Email-only or full access? Does the service offer what you need?
- **7** Do you know what you want your email address to be?
- **8** Will the provider supply software for your particular computer?

What they offer - Service details and pricing

Name	Service n	Start-up	Monthy on going	Vearly on going
Almac	Gold service	none	£7.99 per month inc VAT	£75 pa ex VAT
-	PPP Service	none	£7.99 per month inc VAT	£75 pa ex VAT
Atlas Internet	Atlas Internet	£25	£12	£120
-	Atlas Internet	£25	£12	£120
BBC Networking Club	BBC Networking Club	£25	£12	£144
BTnet	BTnet Premium Dial	£499	£437.50 per quarter	£1750
	BTnet ISDN	£499	£750 per quarter	£3000
Byson Computers	Standard Dial Up	£12.50	£10	£120
Celtic Internet Services	Celtic Internet Services	£20	£10	£120
CityScape Internet Services	CityScape IP-GOLD	£50	£15	£180
	UUCP Gateways	n/a	n/a	£1000
Compulink Information eXchange (CIX)	CIX Ltd	£25	£6.25	£75
Compuserve	Compuserve	£26.45	£8	£96
Delphi Internet	Delphi	none	£1.80 per hour,1st month free	-
Demon Internet	Leased Line Connection	£1000	64k £500-600 pm	£6000-7200
	Network Reserved Dial Up	£750	£10	£100
_	Standard Dial Up	£12.50	£10	£100
Dungeon Network Systems	Standard SLIP	none	£10	£100
Easynet	Easynet	£25	£9.90	£118.80
ElectricMail	cc:Mail to Internet Connection	£1495	-	£380
-	MS Mail to Internet Connection	£1995	-	£380
	MHS Mail to Internet Connection	£1295	= -	£380
	IP-Start	£200	£250 per quarter	£3000
-	IP-Dial	£300	£450 per quarter	£5400
_	IP-Dial ISDN	£300	£750 per quarter	£9000
_	IP-Line	£1000	£1250 per quarter	£15000
EUnet GB	EmailLink	none		£380
_	EmailLink + News	none	-	£580
_	IP-Dial	£300		£1800
_	IP-ISDN	£300		£3000
_	IP-Line 64k/128k/256k	£1000/2000		£5000/85000
-	IP-Line X25	£1000		£5000
ExNet Systems	Basic	none	£7per month 1st month free	-
	Telnet+FTP supplement	none	-	£120
	UUCP service	none	£9	£84
_	Full Feed Service	none	£25	£300
_	Live IP	none	£20	£240
-	Full Live IP	none		£1000
Foremost Training	Scotnet	none	£25	£300
Frontier Internet Services	Dialup Internet access	£25	£10	£120
_	Dialup and Web home page	£25	£13.50	£162
_	Personal Web homepage	£25	n/a	£50
_	Small company Web	£25	n/a	£250
	Web advertising space	£25	n/a	£1000
_	FTP Area	£25	n/a	£250
_	Standard Dialup	£12.50	£10	£120

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	Type of Connection	-	W ₀		X 3 line	te p				10		. ,	Dian	10	
	17.00 60.00	200	ler mem	5	203	Aimed	e l	J. Bay	2.	Usener	Telner	Work	Gon	The state of	Porting of the control of the contro
	ip	V	-		777		V		/	~	V	V	~	V	Business is focused on 'networking Scotland'
	ip	-	×	×	×		v	/	1	~	V	V	~	V	Business is focused on 'networking Scotland'
	ip	V	V	/ X	×	-	V	,	-	/	V	V	V	~	Access available up to 28.8kbps
	ip	V	v	×			V	,	/	/	V	V	V	~	Access available up to 28.8kbps
	ip	V	V	· v			V	,	/	/	~	V	V	V	BBC-related information, transcripts, TV listings etc
	ip	V	V	V		-	V	,	/	/	~	V	~	V	Public Telephone network (via dedicated port – up to 14.4kbps)
	ip	V	V	·	×	- ' -		,	,	/	~	V	-	V	Optional maintained router enabling connection to Internet
	ip	V	×	X	X	h/s	V	,	/	1	~	V	V	V	The Internet Starter Kit, including Demon connection and Chameleon, costs £149
-	ip	V	×	-				,		/	~	~	-	×	Full business support and consultancy
	ip	V	×	_			V			1	-	V	V	V	The same of the sa
	uucp	V	×		-		V	/ >	(8	/		×		×	
	bbs	V	V	×	-		V		,	/	V	V	V	V	
-	bbs	V		_			V		,	1	X	×			FTP, WWW and Telnet are in development
	bbs	V	·				V		,	1	-	×			First dedicated Internet for education
	ip	-	×			-	V		/ 0	1	/	V	V	-	Includes BT leased line cost, £500 pm for 0171 area only
	ip		×				V	,	/		/	~	V		Lan access to the Internet
=	ip	_	×				~	,		,	/	V			Powerful connection including unlimited mail addresses
	ip		×		×	***	~			,	-	1			Dedicated dialup is available from £1500 per year
	ip	_	×			h/s/l	~		-	,		1	_	-	Owner of the Cyberia cybercafé
	ip	_	×		×		W	×		×	X	Y	_		The start-up cost includes the first year's subscription
-	ip		×				~	×		_					The start-up cost includes the first year's subscription The start-up cost includes the first year's subscription
	ip	-	×		×		~	×	-	_					The start-up cost includes the first year's subscription
	ip	_	×	-	×		V	×	-						Modem service for five users
_	ip	V					-	×	_		-				Modern service for unlimited users
	ip	- ×					2	×	_						One-way ISDN service
	ip		×		V	-	V	×	-	4	_	-			Custom built email gateways available
-	uucp	-	×				V	×	-	1					EUnet is part of a 32-country pan-European internet
	uucp	V	×			s/I	4	×		-	-		-		Nine UK nodes and over 100 European nodes
-	ip	V	×				1			,		1			On-site hardware options also available
	ip	×	V	- '			V					,	-	-	One-way ISDN service
	ip	×	×		×		7			,					Prices inclusive of leased line and on-site router
	ip	×			×		V	-		,	/				On site hardware options also available
	bbs	-	X		×	_	V	×		,					Fair usage policy applies, each user only 2 hours a day
	bbs	V		×		h/s/l	V			-		-	_		Includes 10Mb of FTP per day
	ip	-				h/s/l	~	×	-						2-hour usage limit
	uucp	-	Taxani anda	_		h/s/l	V	×			-	and the o		-	No usage limit and domain name
	ip	-		_		h/s/l	V	~	94	,	1	/			2-hour usage limit
	ip					h/s/l	W	2		,	-	1			No time limit
	ip		×			h/s/l	V	~		,	/	-			Glasgow-based Internet provider
	ip	V				h/s	0	~		,	<				Basic Internet services
	ip			-		h/s	V	V		,	\		-		Basic service plus your own Web site
	ip	-	_			h/s	V	-			<	_			Small Web site only (no dialup)
	ip					h/s	V	V	94				_		Up to 15Mb Web pages
	ip					h/s	V	V			-		_	-	100 Mb of Web pages for advertising
	ip	-			-	h/s	V	V			-		_	-	15 Mb of space on FTP server
	ip/ppp					h/s/l/	V	V			-				Range of connections for home users – large businesses in Northern Ireland
	FFFF			-		, 6, 1	200	_			1				Transport contractions for floring users – large pusitiesses in Northern Ireland

What they offer - Service details and pricing continued

Name	Service na	Startup of	Membly on Bolling of	Vearly on Boing c
GreenNet	GreenNet	£30	£15	£180
Leaf Distribution	Servelan	£15	£12.50	£150
Lunatech Research	Luna	£30	£40 per quarter	£120
MacLine	MacLine	£25	£12	£120
	MacLine Internet Gateway	£25	£12	£120
Manx Computer Bureau	Mannet - private leased line	£750	n/a	£3600
	Mannet - dialup	£50	n/a	£120
MARI	Email Link	none		£380
_	Mail Gateways to Internet Connect	£POA		£POA
_	Home page and security services	£POA		£POA
_	Email Link and News	none	2	£580
_	IP-Dial	£300	-	£1800
	IP-ISDN	£300		£3000
_	IP-Line 64k	£1000		£5000
_	IP-Line X25	£1000	F	£5000
MKBBS	Email	none	n/a	£15
NetKonect	NetKonect	none	£10	£120
On-Line Entertainment	On-Line .	none	£5	£60
Paragon Software	MessageXchange	£100	£11.50	£138
Pavilion Internet	Pavilion Internet	£17.75 inc VAT	£14.75 per month inc VAT	£177
- · · · · · · · · · · · · · · · · · · ·	Web space rental	£50	£10	n/a
PC User Group	WinNEt	none	£6.75	£81
_	Connect	£10.00	£7.25	£87
Pipex	Caller	£250		£1200
_	Worldwide	£1000	Ä	£9400
_	Pipex Dial	£50	no.	£180
_	Worldwide Plus	£1800	-	£11500
_	Caller Plus	£1000	-	£2500
_	ISDN Plus	£1000	-	£4000
_	Worldstore Services		-	From £400 – 5Mb
_	Worldweb Services	_	-	From £800 – 5Mb
-	PAD/Telnet	_		£1000
_	Installation Consultancy	£1000	ii.	£1000
-	X.400 Messaging	-	_	£2000
Poptel	Poptel	£25	£10	£120
RedNet	onLine	£25.00	£15	£221
Research Machines	Internet for Learning	£25	£10	£120
The Direct Connection	The Direct Connection	£7.50	from £10	£120
The Internet in Nottingham	The Internet in Nottingham	£17.63 inc VAT	£14.69 inc VAT	£176.28
Total Connectivity Providers	Freestyle	£7	£10	£114
_	Express Ultra	£7	£20	£140
_	Twilight	£7	£8.50	£96.90
U-NET	U-NET	£12	£12	£100
Vossnet plc	Voss Net On-Line	n/a	£30 per quarter	£99
Zynet	Zynet	£20	£12	£144

The of connection	No.	Men	NOO.	-eased li-	Aimed at		Email	FTP	Usene	Teln St news	Want	Go mayide	dev rehau	Service of
ip/bbs	~		/ >	< 1	h/s/l/		1	1	V	V	×			Specialises in peace, human rights and environmental issues
ip	~		1 0	1	× h/s		1	1	V	V	V	V		Software & modem bundles availble – complete package £350
ip	~)	< ×	< 1	× h/s		1	1	V	V	V	V		Quality service for local homeworkers in the Reading area
ip	~		/ ×	< 1	× h/s/b		1	/	V	V	V	V		The only dedicated Macintosh Internet provider
ip	V		/ ×	()	× h/s/l		1	/	V	V	V	V		The only dedicated Macintosh Internet provider
ip	V		1 0	1	s/l		1	1	~	V	V	V		Modem ratios: best 5:1, worst 10:1
ip	~		1 0	1	h		/	/	V	V	V	V		Modem ratios: best 5:1, worst 10:1
uucp	~	>	< ×	()	× s/l		1)	×	×	×	×	V		Northeast-based service provider
ip	V		10	1	/ s/l		1	- 1	×					Packaged email gateways available
ip	V		1		/ s/l		/ .	/	~	V	V			Customised home pages and security software and services available
uucp	V	>	< ×		/ s/l		1 >	×	V	×	×			Gateways to cc:Mail, MHS and other mail servers
ip	V	>	< ×	()	K s/l		1 .	/	V	V	V			On-site hardware options also available
ip	×		×	()	K s/I		1 .	1	V	V	V			One-way ISDN
ip	×	>	(v	' >	< s/l		/ .	/	V	V	V	V	V	Prices inclusive of leased line and on-site router; hardware purchase available
ip	×	>	×		/ s/l		/ .	/	V	V				Lease or purchase plans available on hardware
bbs	V	>	×	>	< h/s		/ .	/	V					Basic bulletin board service with email connection – dial 0908 234583
ip	V	v	, ,		/ h/s/l		/ .	/	V	V	V			Also has full range of other services
ip/bbs	V	>	V		h		/ .	,	V	V	×			Multi-user games
ip	V	v	, ,		/ h/s/l		/ >		CONTRACTOR -		-		-	Gateways to cc:Mail, Microsoft, Lotus, SMTP; prices vary for business users
ip	V	×	_				,	,						Local calls within Brighton via Nynex Cablecomms
ip	×	×	-	-		>	()	<						£10 per Mb per month – Web authoring £150 daily
uucp	V	×	4	-	< h/s		/ >							WinNET is an offline system - time charged hourly £3.25 ph + VAT
bbs	V	×		-	h/s		,	,	,					PC User Group is the home of the email-based Movie Database Server
ip	V	×	-	-	< s			,	/					Entry level corporate access to the Internet
ip	×	×		-	(s/l		,	,	/					
ip	V		X		< s			,	,					64k digital leased line 64k, 24-hour/7-day support – reduced rate in London
ip	×	×		-	< s/l									Full Internet access for mobile and remote users – includes software
ip	V	×			(s									Digital leased lines – 64k, 128k, 256k and higher – includes lease and installation
ip	×	V	-	-	(Includes lease installation and support of on-site router and modem
ip	×	~		-	-									Corporate connection over digital dialup – includes lease and installation
	×	~		-	s/l									£6 per Mb for up to 100Mb, then £3 per Mb; provides FTP use on worldserver
ip			_	_	()	~								£10 per Mb for up to £100Mb, then £4 per Mb; WWW use on Worldserver
ip	×			_	s/l	- diameter	-	-	According to	_	-	_		Protocol translation between PAD and Telnet protocols
ip			~			×	×		×	×	×	×		Installation, remote management, includes all configuration work
ip	×	~	-	-	k h/a/l	-	. "			-	-	~	-	Provides an X.400 email address without needing to run X.400
ip	-	X	-	-	h/s/l	-			_	-	-	~		Local-call access via Dialplus throughout the UK
ip		X	~		h/s/l	V	. "		-	-	-	-		Especially skilled in Macintosh integration – easy to install start-up disk
ip bba/in	-	~	~	-	h/e	~	. "			-	-	~	-	Making Internet available to education community, excluding business users
bbs/ip	V	-		-	h/s/l	V	. "			-	-	V	~	, add date of the second of th
ip	V			Continue	h/s	V	. "	1		-	-	~	~	Local service for home/business users in Nottingham area
ip	~	-	_	1	h/s	V	, ,	1		-	-	~	~	The tribute includes free personal very page
bbs		V		-	h/s	-	×	-	-	_	×	×		Reserved line option available; full member of CIX
bbs		~		-	h/s	V	×				×			7pm – 7am access, V.34 modems, personal Web pages; full member of CIX
ip	-		-		h/s	V	-				~	V	_	Service for Windows only, high-speed modems throughout
ip			_	-	h/s/l	V	V		1	-	×	V	-	1 hour per week free; £2.40 per hour; easy to use, integrated, multi-tasking
ip	~	V	V	×	h/s/l	V	V		/	/	V	V	V	Full network connection; Exeter-based education specialist



The INTERNET diary is Europe's noticeboard for events on and about the Internet. Send submissions for inclusion to diary.internet@computing.emap.co.uk. Include the date, venue, price and contact information. Please be sure to include a phone number as well as an email address. Advice to readers: we cannot guarantee all these events will be worth the money asked... Attention event organisers: as part of our commitment to promoting the wider use of the Net, we at INTERNET are prepared to participate in planning, publicising and participating in any legal Net-related event. Contact Roger Green, publisher, at rogerg@computing.emap.co.uk

Date	Event	Venue	Organiser	Contact	What's It All About?
7-28 March	Doing Business on the Internet	Park Lane Hotel London	Technology Transfer Institute	Technology Transfer Institute 0181 741 1922 100144.1553@compuserve.com	Ex-AT&T computer scientist and consultant Brian Nejmeh looks at a potential business strategies and case studies. £695+VAT.
8-29 March	Electronic Messaging	Cumberland Hotel London	Unicom	Seamus Flanagan, Unicom 01895 256484 seamus@unicom.demon.co.uk	Heavy duty corporate electronic messaging event with some Internet content. Aimed at delegates in very large organisations.
29-30 March	The Internet, EDI and Email for Electronic Commerce	Royal Aeronautical Society London	PC User Group	PC User Alan Jay info@win-uk.net	Group Electronic Document Interchange (EDI) – event for network and IT managers. £290.
80-31 March	Doing Business on the Internet	Grand Hotel Birmingham	Technology Transfer Institute	Technology Transfer Institute 0181 741 1922 100144.1553@compuserve.com	As first entry, above. £695+VAT.
I0-13 April	Spring Internet World and WWW Conference and Exhibition	San Jose Convention Center, California, USA	INTERNET/ Mecklermedia	Mecklermedia 0101 203 226 6967 iwconf@mecklermedia.com	Spring edition of twice-yearly US conference and expo. Expect it to be bigger than ever.
19 April	Doing Business on the Internet	Old Town Hall Gateshead Tyne & Wear	The MARI Group	Stan Tatko 0191 402 0191 sjt@mari.co.uk	An introduction to all aspects of the Internet, aimed at business people in northeast England. Tickets £100.
20 April	Cyberfeminism Discussion Series: ? Is Etiquette Sexist	Cyberia London	Cyberia/ INTERNET	Cyberia Sally Matrick 0171 209 0982 ally@easynet.co.uk	How to forge a female-friendly cyberspace. Includes an examination of misogynist groups. Tickets £5.
24-25 April	Accessing the Internet	Britannia Country Hotel, Derbyshire,	Data-Tech	Data-Tech 0181 780 2412	For would-be users of Internet access in business, £795 cost includes Chameleon software.
28 April	Internet Business Briefing	Merrill Lynch Building, London	Internet Publishing	Colin Farrow, Internet Pub. 0171 253 6934 internet@power. globalnews.com	Business-oriented event co-sponsored by BT, Sun and INTERNET. £295.
3-5 May	Getting the Most out of the Internet	Kensington Hilton London	Omnicom PPI	Omnicom PPI 01438 742424	Three-day event covering business as well as TCP/IP issues. £985 +VAT.
4 May	The Daily Telegraph Conference	Earls Court International Hotel, London	First Europe Comms	Adam Elgar, First Europe 0171 490 3318 telegraph.conf@computing. emap.co.uk	Sponsored by pioneering electronic edition of <i>The Daily Telegraph</i> , also IBM, BT and INTERNET . How business can use the Internet to cut costs and increase sales.
15-16 May	Accessing the Internet	Forte Crest Hotel Heathrow	Data-Tech	Data-Tech 0181 780 2412	For would-be users of Internet access in business, £795 cost includes Chameleon software.
16-18 May	Internet World International 95, London	Wembley Conference and Exhibition Centre London	Learned Information	Michael Histop Learned Information 01865 730275 michael_histop@learned.co.uk	Third year of UK exhibition and conference. See INTERNET there.
25 May	Internet For Your Business / TCP/IP: Running a Successful Network	Shire Hall Reading	Integralis	Karen Liddell Integralis 01734 306060 k_liddell@integralis.co.uk	Two part event: detailed introduction of TCP/IP network protocols, together with strategic discussion of what the Internet can do in business £60 +VAT one seminar / £90 +VAT for both.
18 May	The Music Industry	Cyberia London	Cyberia/ INTERNET	Sally Matrick, Cyberia ally@easynet.co.uk	Industry leaders debate how the Internet will revolutionise the buying and selling of music.

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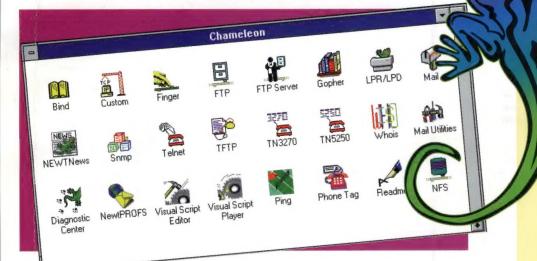
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